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HOUSE OF ROYAL F. HAMMETT, GERMANTOWN, PA.
CARL A. ZIEGLER, *ARCHITECT*

Post-War Housing

POST-WAR conditions have wrought great changes in every line of business activity in this country to which even the most conservative men of affairs have had to submit or fall behind in the march of progress.

The call which these new conditions has made to the architect is no less mandatory and he who will not heed the summons cannot hope to perform his obligation to his client or to his profession. So acutely have these conditions affected the prospective home builder that our records for the past year show what is practically a cessation of home building. The shortage of proper housing facilities, which has affected all classes, has become so serious as to receive the attention of the Federal Government. The architect has not only the very considerable increase in the cost of labor and material to consider, but also the very decided change in the attitude of the workman toward his task. It is unfortunately true that craftsmanship suffers when the craftsman is obliged to concentrate his energy on the securing of a higher wage in order to meet the increased cost of living, and once the imaginative mind of the work is turned toward the pursuit of the elusive dollar, the cunning of the hand is gone. This has ever been true of craftsmanship and therein lies the distinction between art and commercial enterprise.

To the architect these new conditions call for keener imagination, a deeper understanding of the psychology of the times, and he must not be too old or too tired to invent new methods to meet the conditions imposed upon him. How to renew the interest of the worker in his crafts is not the least of his problems, for without this sympathy his best efforts

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are in vain. May it not be that in overcoming these obstacles a way may be found to eliminate many of the objectional features pertaining to so much of the pre-war designing, especially as applied to dwellings of moderate size?

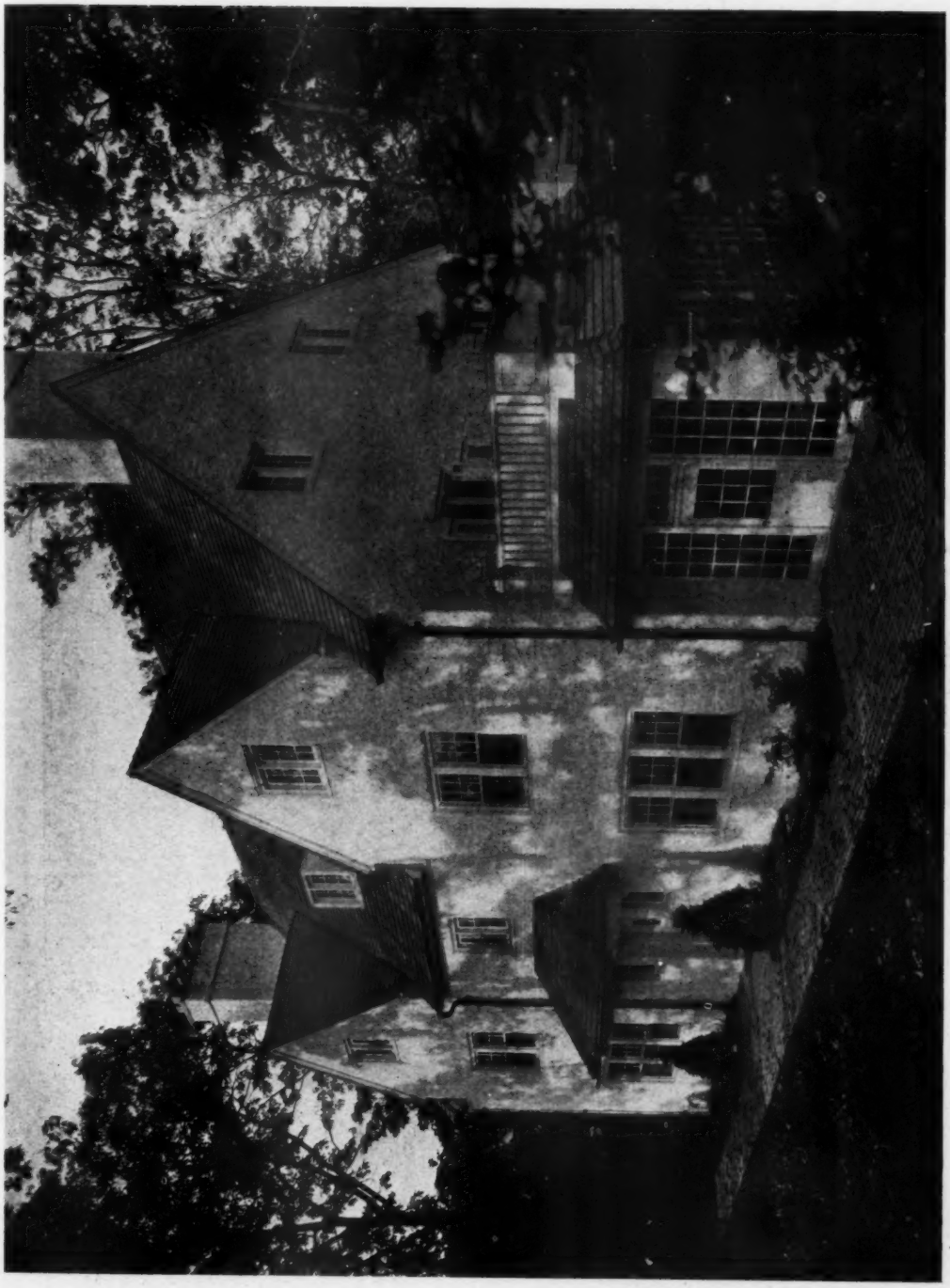
Every architect has met at least once in his practice the Church Committee with a modest sum to be expended and a plan combining all the features of the cathedral. If he suggested one of the charming English parish churches as a more suitable prototype, he probably lost the commission and John Doe built the church with a galvanized iron clearstory and a skylight cover, all within the contemplated amount, and no extras. Sometimes the designing of dwelling houses is surrounded by just such impossible conditions; the owner has had the matter in mind for several years and has carefully compiled a scrap book of clippings showing all the features which he wished embodied in the house. He has inspected the houses built by his friends, some of which he admits have good points, but most are failures. Now he proposes to build the "Perfect House," all the materials are of course to be of the most finished manufacture, the bricks pressed, the glass plate; add to this the fact that the house was conceived before the lot was purchased, and the result is obvious. The use of highly finished materials has set its mark so indelibly upon house building in some sections of the country as to preclude the possibility of securing for the moderate sized house any individuality other than a stilted and formal effect.

Now that we are facing new conditions in the cost of building, may we not hope for a more general use of native material, less highly finished? This would lead to an awakening of the imagination on the part of the designer and would undoubtedly result in more intimate home building.

IN certain sections of the country the profession has long been aware of the existence of just such a use of local material, which, combined with a purity and refinement of design, has led to the preservation of a regional type that has come down in perfectly logical order from the Colonial days, despite the fact that it has also met all the many requirements of modern life.

A HOUSE IN THE WISSAHICKON VALLEY, GERMANTOWN, PA.
CARL A. ZIEGLER, *ARCHITECT*

Perhaps no section has accomplished more in this line than the suburban section of Philadelphia. There a group of architects have so assiduously and forcefully educated the home builders to the beauty of the local ledge rocks when properly used, that there is very little demand for the stately mansion crowning the pretentious estate, which is the aspiration of so many other sections, but instead we have the intimate country house conforming to its surroundings and



GARDEN FRONT
HOUSE OF BURTON ETHERINGTON, GERMANTOWN, PA.
CARL A. ZIEGLER, *ARCHITECT*

expressing so quaintly in most cases the individuality of the owners.

The cost of this type of house is less than the more formal type, as the result depends more upon the ingenuity of the architect than upon the use of expensive materials.

In no other city of the first class are stone houses erected at a lower cost than in the suburban district of Philadelphia.

The houses illustrating this article are the work of Carl A. Ziegler, an architect of Philadelphia, and the effect is very striking, especially if, as in Mr. Etherington's case, the house is surrounded by trees which cast flickering shadows across the white texture of the walls, no two portions of which are exactly alike. Walls finished in this manner cost considerably less than those laid up of face stone. The use of the dry stone wall for the terrace offers a splendid foil for the white texture walls behind.

The beauty of this house lies in the restraint exhibited in its designing, which accents the splendid proportion of the gables and chimneys. The fenes-

DINING ROOM
HOUSE OF BURTON ETHERINGTON, GERMANTOWN, PA.

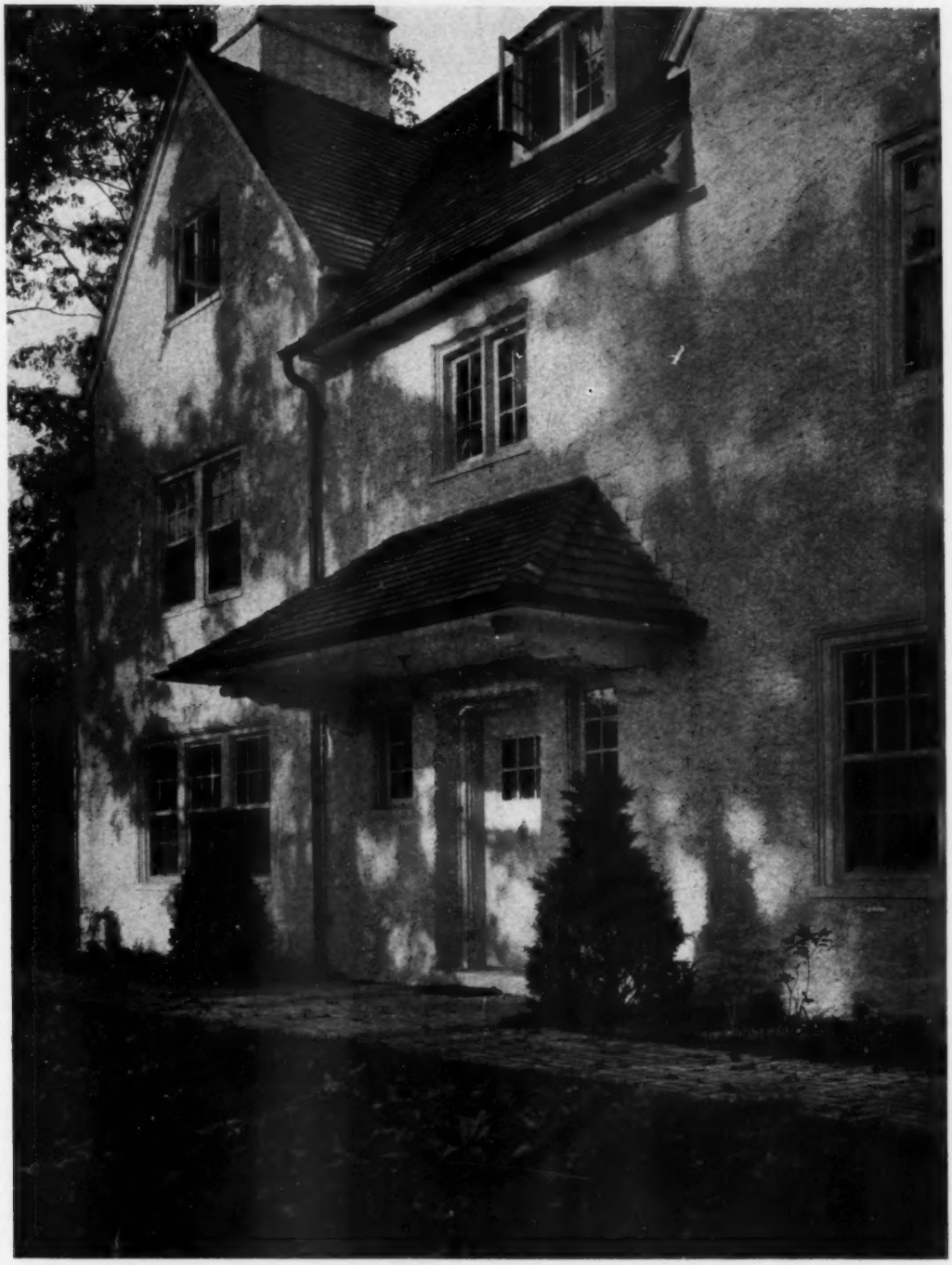
were built during the readjustment period that has been so trying to all building projects. All are built of local stone, varied in treatment, and all express a well bred contempt for ostentatious ornament.

In the house of Mr. Burton Etherington the walls were built of the roughest sort of rubble work, such as would be used in the average cellar wall. The joints were then filled with a gravel mortar which is smeared on the surface of the wall, allowing a portion of the stone to show through. This gives a texture very different from the usual monotonous stucco treatment, and when coated with a special whitewash

tration on the rear is particularly interesting, as is also the drawing down of the roof line on the kitchen wing.

IF the ever mounting cost of building will force us to the use of such simple forms for our houses, students of architecture may look back upon the trials and tribulations of this period as not without its compensations.

In the other houses illustrated local stone was used for the facework. This was laid up rubble fashion by Italian masons who come mostly from Southern



ENTRANCE DETAIL
HOUSE OF BURTON ETHERINGTON, GERMANTOWN, PA.
CARL A. ZIEGLER, *ARCHITECT*

Italy, bringing with them little else beside an innate knowledge of stone craft which they rightly inherit from their forbears, who for generations fashioned the terraced gardens about the Gulf of Salerno and the Bay of Naples. These men may be trusted to intuitively select stones of the proper form and color to produce the best effect in the wall, and with their cheerful disposition enlivened by snatches from the operas of their beloved Verdi, they form an oasis in the desert of the present day labor difficulties.

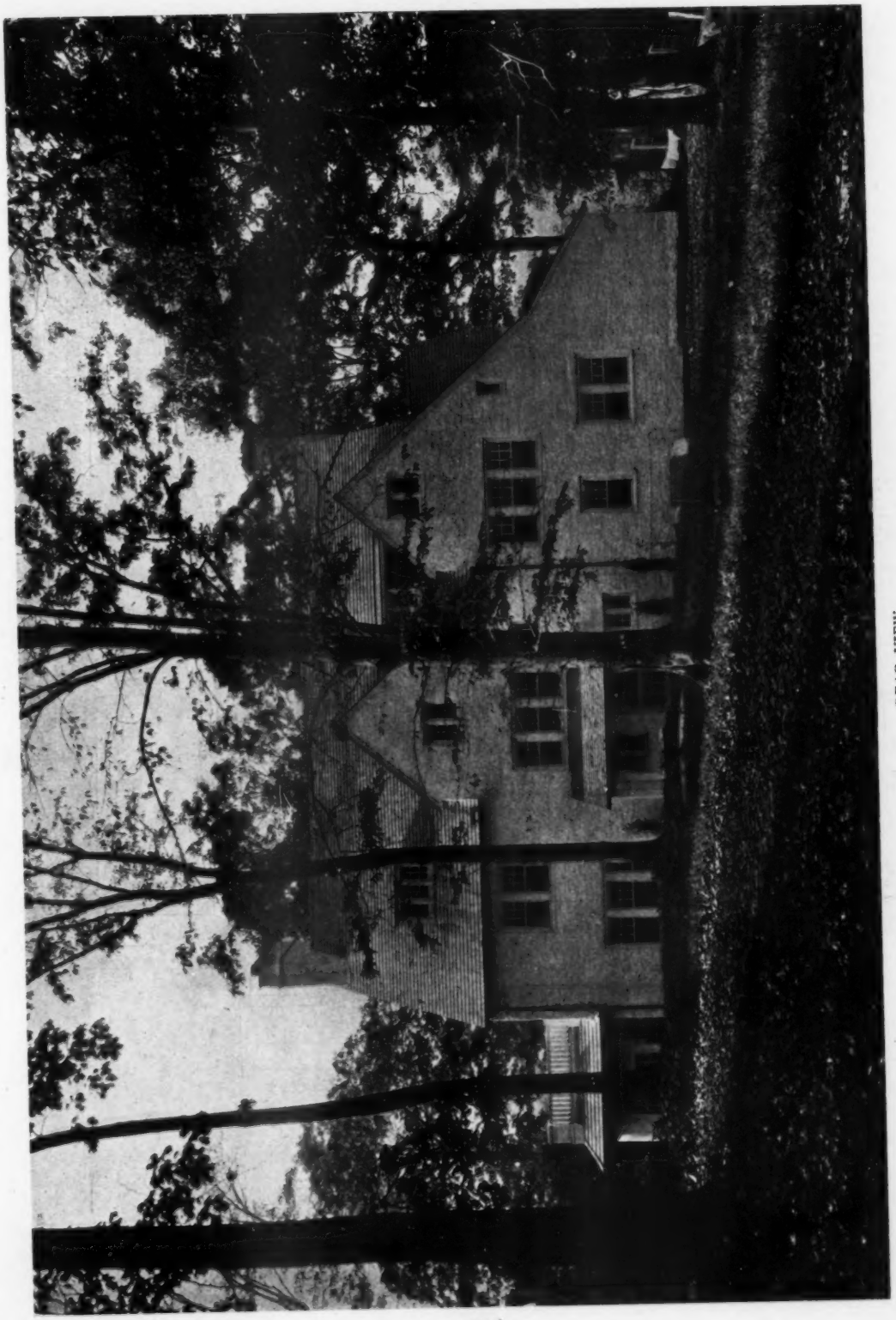
At Princeton University it was the custom for many years to import facestone from Pennsylvania at a great cost. When Holder Hall was planned the architects found a local stone which had been rejected by former builders and urged its use. After demonstrating its beauty and fitness for the purpose, the authorities consented to the change, thereby saving many thousands of dollars, and to-day Holder Hall is referred to by the profession as one of the finest specimens of stonework in the country.

The architect of today, if he has not been worn out by the multiplicity of cares imposed upon him by the difficulties of the contracting business, may by a more imaginative use of local materials not only save his client considerable expense, but he may, at least in his country house work, develop that much to be desired regional type that means so much to us when we see it in Cotswords of England, the Manors of Normandy, or the villages of Italy and Switzerland.

IN our early history we had such regional types. the New England type, the Dutch Colonial houses of New York, or shall we say New Amsterdam? The Pennsylvania, Maryland and Delaware farmhouse type, and the stately mansions of the Cavaliers in the South, each fittingly depicting the character of the people who conceived them.

For purely utilitarian reasons the business of house building must be readjusted to meet the new conditions, and if the architects of the country can sufficiently influence the public mind, may we not hope for some reduction in the multiplicity of ridiculous forms used in so much of our house building before

STAIR HALL
HOUSE OF BURTON ETHERINGTON, GERMANTOWN, PA.



REAR VIEW
HOUSE OF BURTON ETHERINGTON, GERMANTOWN, PA.
CARL A. ZIEGLER, *ARCHITECT*

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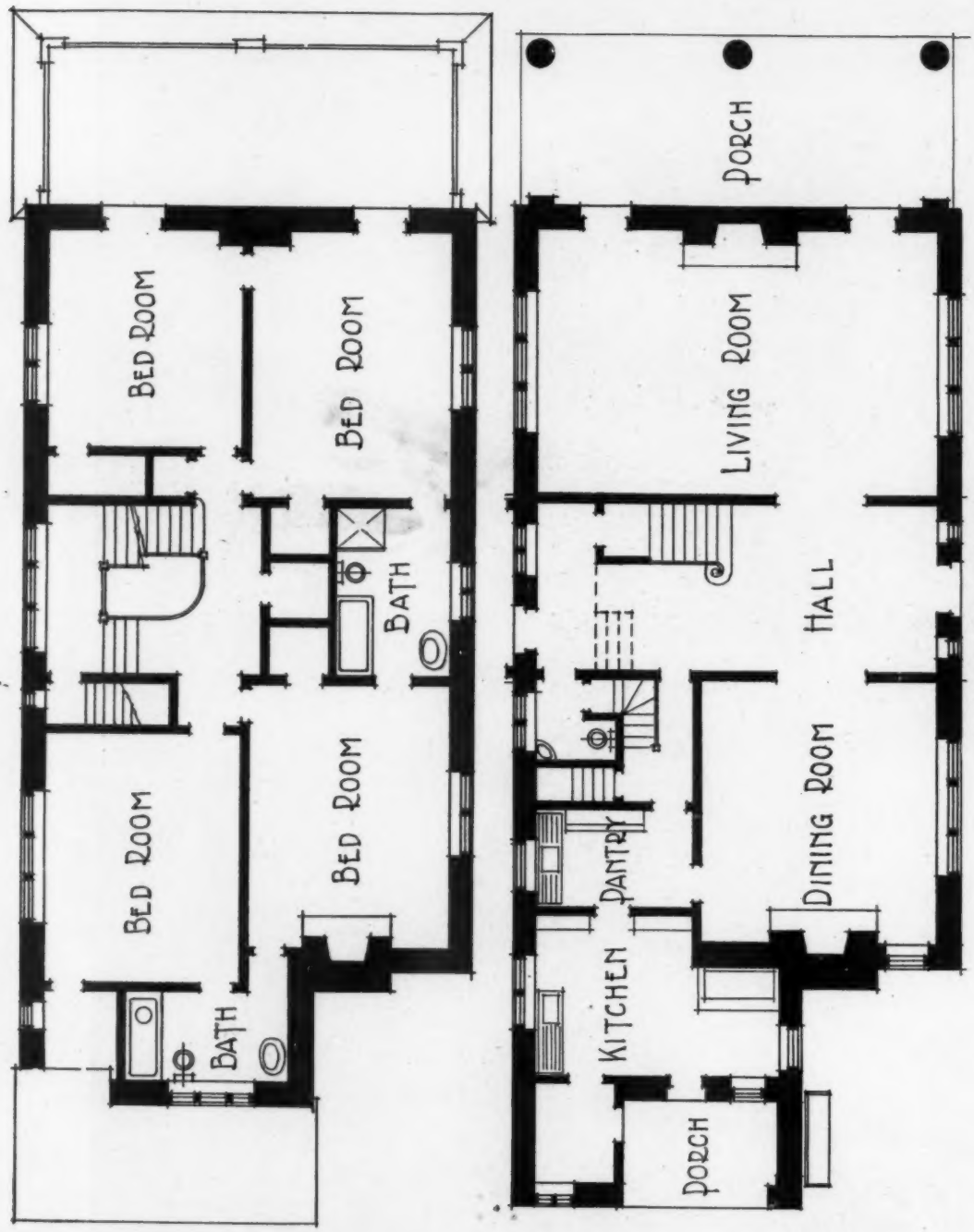

FIRST AND SECOND FLOOR PLANS
HOUSE OF BURTON ETHERINGTON, GERMANTOWN, PA.
CARL A. ZIEGLER, *ARCHITECT*

the war. If anything is achieved along this line, it must emanate from the architectural profession. The problem is perfectly clear and thousands of the prospective house builders are patiently waiting for the architect to demonstrate how a well designed home may be built at moderate cost.

The year 1921 holds the promise of a resumption

SERVICE WING
HOUSE OF BURTON ETHERINGTON,
GERMANTOWN, PA.

of house building on a large scale. It is true that only about 3 per cent. of all the building done in this country is designed by architects, but this small percentage is the leaven which permeates the whole, and it is to the architect that we must look for the influence that will lead the proposed home builders to an appreciation of the truly fine things that may be done in a simple way.

The Rebuilding of Regent Street, London

BIT by bit the stucco architecture of the Regency is disappearing from the west end of commercial London. Within recent years whole sections of Regent street and its neighborhood have been swept away, and, if the present rate of demolition continues, it is prophesied in the *Architects' Journal* that within a very few more years there will be little trace of those classic but perishable façades that were the characteristic product of the Regency.

The reason for their disappearance is not far to seek. Nash built on a scale which, though perfectly adapted to the requirements of the early nineteenth century, is totally inadequate for the needs of modern commercial enterprise. Nash's elevations are seldom more than three stories in height, while the generality of modern commercial buildings in London run to more than twice that number, and height is undoubtedly still on the increase. Also, Nash "found us all brick and left us all plaster;" and while there is a natural reluctance to demolish a building constructed of good solid stone, stucco, by its very cheapness and impermanence, seems almost to invite demolition. Good as are the reasons for the destruction of so much of this work, one cannot but regret its passing: for Nash contributed a valuable and extremely interesting quota to the development of monumental architecture in this country. We was without his peer in the composition of façades of great length in infinite variety—façades, moreover, which, when placed in juxtaposition, produced a complete unity of effect. He brought the art of street-designing up to a pitch of excellence that it had never reached before, and from which it has since sadly fallen, as nearly all our modern thoroughfares make us only too painfully aware.

Regent street, it is interesting to recall, was designed and carried out between the years 1813-16; thus its term of useful service only just exceeds the century. The total cost of the entire scheme was, approximately, a million and a half sterling, which shows how economically building work could be carried out in the days of George IV. Today it would probably cost almost as much to build, in permanent materials, only one of Nash's monumental blocks.

Just recently two or three further large sections of Regent street have been demolished to make way for new buildings. One of these accommodates the new premises, still in course of erection, for Messrs. Dickins and Jones (Sir Henry Tanner, architect), while the others consist of the northwest and northeast corners of Oxford Circus, upon the latter of which palatial new buildings are to be erected for Messrs. Peter Robinson from the designs of Mr. H. Austen Hall, F.R.I.B.A. The illustrations accompanying these notes show the latter site before and after the demolition of Nash's work. The section involved, it will be seen, was typical Regency architecture, dignified and stately to the last, despite its ugly and obtrusive modern shop fronts.

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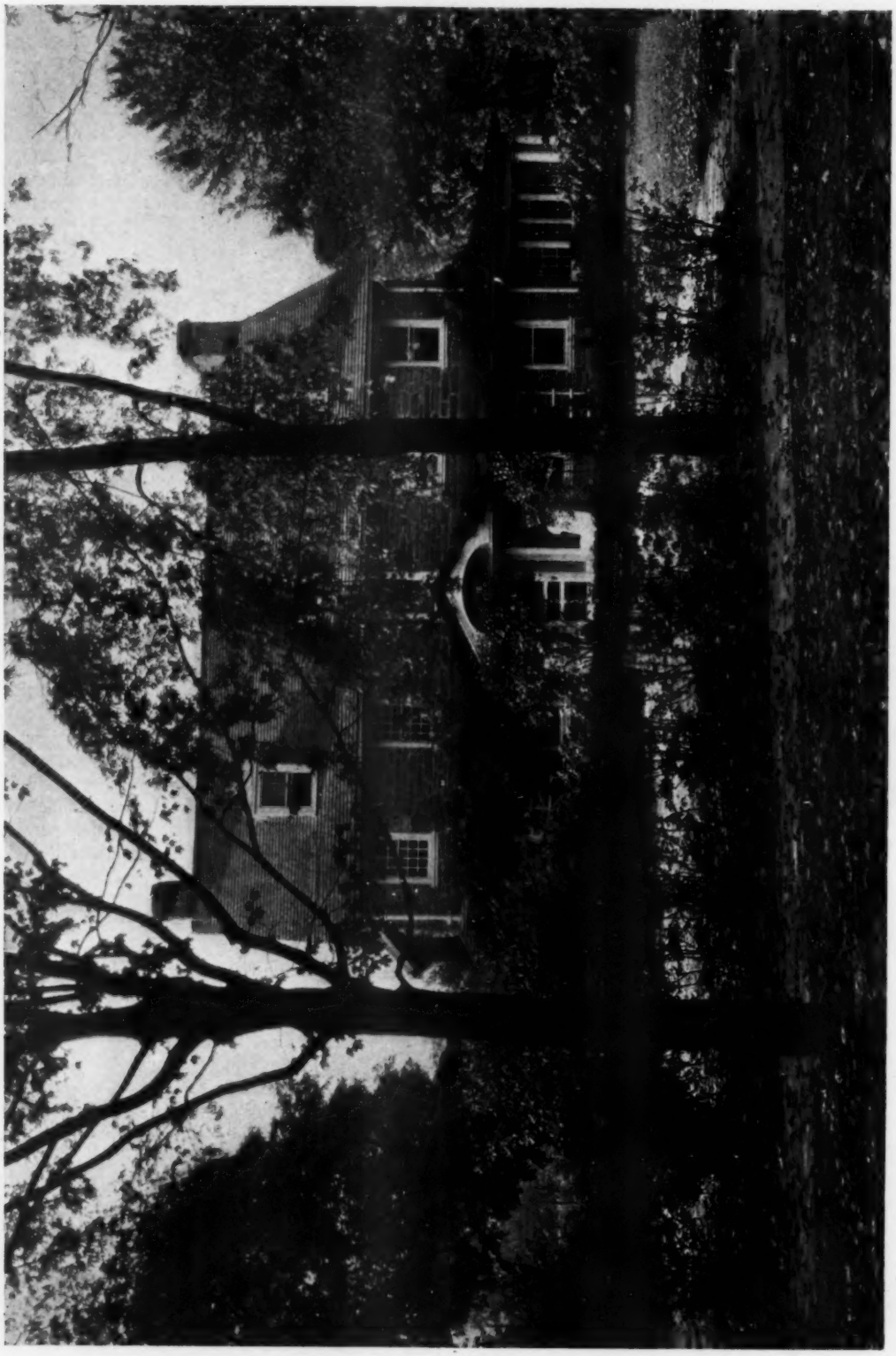

HOUSE AT ST. MARTINS, PA.
CARL A. ZIEGLER, *ARCHITECT*

Notes from London

By Special Correspondent of THE AMERICAN ARCHITECT

AS one result of the world war London is becoming peopled with statues, and we can only pray that they may be more successful as works of art than some of those which were erected —even Cobden did not escape, but came off, if I remember right, specially badly—in the mid-Victorian era. To mention only a few of those which are now in progress there is the proposed Memorial to the Royal Naval Division, upon a site at the foot of the steps beneath the Duke of York's column in the Mall: there is the statue of the late King Edward, which is now approaching completion, and has been proposed to take the place of the existing Napier statue, for which a new place would have to be found as an alternative to its present fine position between the United Service and the Athenaeum Clubs, though it will probably still remain in the lower end of Regent street.

Even the Duke of York himself is threatened, and it has been suggested that he should descend from his airy perch, and make room for Lord Kitchener or some leader of men who had achieved more for his country than the genial Royal Duke, whose generalship seems to have been about on a level with his army patronage. Then there is the Guards Memorial, whose very appropriate site, on the west side of Horse Guards Parade, facing the archway, has been approved by the King and the joint assessors to the committee for this monument, who are a leading sculptor and architect, Sir Thomas Brock, R.A., and Sir Reginald Blomfield, R.A.

But I propose to give my attention in this notice to one monument which has a very special interest and value, in that it is the spontaneous expression of a nation's gratitude. Many among us can still remember those dark days of the winter of 1914 and yet later, when the unhappy refugees from Belgium came pouring across the Channel, often with absolutely nothing left save what they could carry in their hands. I myself knew a distinguished artist who escaped in this way, and for years could learn nothing as to his property left behind. One page in the late war to which we can look back with entire satisfaction is that of England's effort for these unfortunate people: we all did what we could, and the result, if it could not remove, did much to alleviate their sufferings.

And Belgium has not forgotten. The monument which was unveiled on Tuesday, October 12, by Princess Clementine of Belgium in the presence of M. Leon Delacroix, Prime Minister of Belgium, and many distinguished spectators, was entrusted to the greatest living Belgian sculptor, Victor Rousseau, to hand down the memory of Belgium's gratitude to England in her day of trial. M. Rousseau has treated his subject with becoming simplicity: he has given us a group of three figures, a draped woman advancing preceded by two children, one of these a nude figure, admirably modelled, of a fully grown boy, the other a young girl. Myself an enthusiastic admirer of Victor Rousseau's genius in sculpture, and having followed his work for years, I do not hesitate to say here that the present group is not, in my judgment, one of his most successful creations. It is not so much the draped woman, who is as unattractive as the children are excellent, as the whole lines of the composition which are unsatisfactory: my reader can, however, form his own opinion on this point to some extent from the excellent reproduction which has been kindly placed at my disposal by the Anglo-Belgian Union, and will there see that these lines all run away at a slant from left to right, the only balance being in the upright figure of the boy, which is, in fact, the redeeming point of the whole group.

When, however, we come to the architectural setting, in which I understand that cultured English architect Sir Reginald Blomfield has had a large share, the impression is far more satisfying. The spacing of this screen, facing on to the Thames, is admirable, and not less so the two figures introduced of Justice and Honor—this last a male figure fully armed and with something of the inspiration of the wonderful Donatello S. George, set without Orsammichele at Florence—while the coats of arms of the Belgian provinces are as decorative as they are entirely appropriate. The week of the opening ceremony was devoted to a round of Anglo-Belgian festivities: after the unveiling followed a luncheon offered by the Lord Mayor of London in the historic Guildhall, then a Government banquet at Lancaster House in the evening, on the Thursday a luncheon by the Anglo-Belgian Union at the Hotel Victoria, and the day following a reception of the Belgian visiting members by Princess Louise at Kensington House.

What was, however, behind these official festivities, and far more important, was the sentiment here expressed of Belgium's gratitude and memory. After her terrible and scathing trial Belgium is making a marvellous and astonishing recovery, details of which I noted myself when passing through this country last spring. While we are wasting our energies in useless and costly strikes she is quietly working—working hard, preparing to take a deservedly great place in the European comity of nations.

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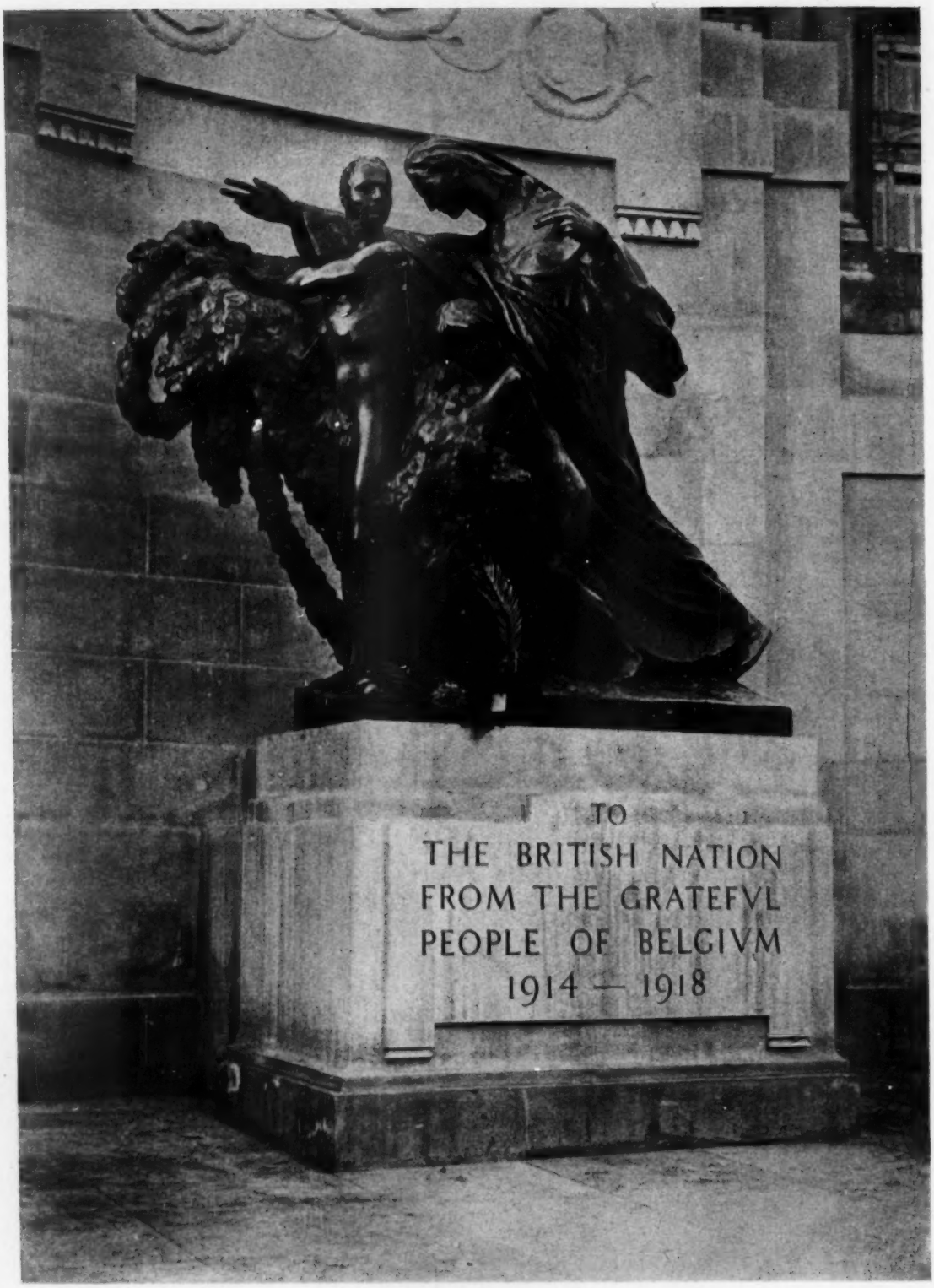

BELGIAN MEMORIAL, LONDON
VICTOR ROUSSEAU, *SCULPTOR*

Architectural Quicksands

By CLINTON H. BLAKE, JR., of the New York and Federal Bars

Termination of Architect's Employment

THE employment of an architect, or of any similar professional man, is clearly a contract of personal employment. The client depends upon the personality and special qualifications of the adviser whom he employs. It is hardly necessary to say that a contract of this character cannot be assigned by the architect and the client thereby forced to accept, as his adviser, someone other than the person whom he chose, and to whom he has been willing to entrust the work which he desires to have done. The client is not the only one, however, who is interested in the personality of the architect and whose rights are affected thereby. The interests of the contractor are directly affected by the character of the architect that is selected. The contractor is not interested to the extent that the client is interested but he has, nevertheless, very real interest in the type of architect chosen and in his standing and ability, in the field wherein he is chosen to act.

Under the ordinary construction contract the architect is called upon to perform various duties as arbitrator and duties wherein it is necessary that he act in a more or less judicial capacity, with fairness to the client and to the builder and with obligations to each of them. This phase of his work I have already considered in another connection. If the construction contract be so drawn as to leave important details of construction, interpretation of the plans and specifications and the like, to the discretion of the architect, it is but logical that the contractor should not be forced to proceed with the work if the architect be changed without his consent and contrary to his desire, unless, of course, the contract specifically covers this point and provides that a change in architects may be made without consulting the contractor.

I was consulted recently in a case on this very point. The contract left many substantial questions open to the decision of the architect and the latter, under the terms of the contract, was necessarily called upon to act in a judicial capacity and as arbitrator, on many points, between the client and the contractor. The contractor's interests were directly involved by the decisions of the architect and the contractor entered into the agreement, in the first instance, because he knew the reputation and standing of the architect chosen and because he had faith, not only in his integrity, but also in his fairness and in his general broad-minded point of view, in dealing with questions which involved both the rights of the owner and the rights of the contractor.

After the contract had been made the owner, for some reason, decided to employ a new architect in the place of the architect specified in the agreement. As between the client and architect, the client cannot be compelled to continue to employ an architect, longer than he desires, and he has a perfect right to employ another architect in the place of the one originally chosen, subject to any claims for damages which the architect who is displaced may legally have. A new element is brought into the situation, however, when the rights of the contractor are involved. If the contract be similar to the contract in the case to which I have above referred, the contractor may well take the position, it seems to me, that if a new architect, and one in whom he is not ready to place his confidence, is to be employed, he will not proceed under the construction contract. When the latter contract was entered into the rights of the parties became fixed thereby and, if the contractor executed the instrument in dependance upon the employment of a particular architect, it is but fair that he should not be forced to proceed with the work under the direction of an entirely different architect of the work in the first instance.

The matter, in the last analysis, is a question of contract. As such it is dependent upon the phraseology of the particular contract employed. If it is desired to give to the owner the right to change his architectural adviser, without affecting the obligations of the contractor under the agreement, the contract should be so worded as to make this point clear.

It is interesting to note that Article 9 of the General Conditions of the Standard Documents of the American Institute provide that, in the event of the termination of the employment of the architect, a capable and reputable architect may be appointed by the owner and that the status of this succeeding architect, under the contract, shall be the same as was the status of the architect whom he succeeds. Under this provision a contractor cannot object to the appointment of a new architect, provided that the new architect is "capable and reputable." This is entirely reasonable and proper and the employment of a clause, similar to the Standard clause referred to, will necessarily greatly lessen the possibility of disputes, between the owner and the contractor, in the event that a change of architects is effected, during the progress of the work or after the original contract is entered into.

In the Kitchen Garden, Mount Vernon, Va., the Home of George Washington

(See reproduction of original drawing by O. R. Eggers on opposite page)

IN a preceding issue a detail of Mount Vernon, the home of George Washington, was reproduced and described. The subject of the present sketch is a view of the Gardens, which with their walks and terraces and essential buildings remain today as planned by Washington.

These lawns and gardens are on the West side of the house, where was the approach from the public highway. They comprised about twenty acres and were enclosed by brick walls. One of the two small octagon garden houses erected by Washington is shown in the sketch. These were built to store seeds and tools. They have brick bases and are boarded in imitation of stone forms, after the manner of the dwelling house.

Just what are these elements of greatness that make Washington the central figure of his age and have with each succeeding year caused his memory to be held in ever increasing respect, it would be difficult to define. Yet, the spirit of the man pervades today these historic localities. The visitor will note the absence of noisy hilariousness that usually marks the tourists to historic shrines. Perhaps it is because in a small tomb, but a few steps away rest the bones of Washington, and if the visitor fails to sense the nearness of the illustrious dead, he will have a solemn reminder in the tolling of the bell of some passing ship of war on the Potomac river, whose officers and men stand at silent salute.

From 1743 to 1859 Mount Vernon was held in possession of members of the Washington family. In 1859 it was purchased by the Mount Vernon Ladies Association. Since then the restoration of the place has been effected, much of the original furniture reclaimed and installed. Today Mount Vernon stands as nearly as it did when Washington lived there as human endeavor can make possible.

THE KITCHEN GARDEN AT MT. VERNON, VA.
THE AMERICAN ARCHITECT Series of Early American Architecture

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EDITORIAL

Reputable and Disreputable Practices in the Building Industry

AS an illustration of the public sentiment regarding Mr. Untermyer's inquiry into the fee system of architects, we reprint, in full, the following editorial from *The New York Times* of Saturday, December 11. Editorial expression of as large and important a newspaper as the *Times* may be very well taken as an accurate gauge of public reaction and opinion, and it is for that reason that we reprint the editorial in full. It is as follows:

THE ARCHITECTS' CODE.

It was natural that Mr. Untermyer as counsel for the Lockwood committee should inquiry into the fee system of architects, but no impropriety of code or combination was disclosed in the testimony and none is conceivable to those familiar with the practice of the architects who compose the Institute.

The "minimum charge" of 6 per cent. "based upon the total cost of work completed" contrasts significantly with the profits of from 89 to 155 per cent. which were revealed in the investigation of manufacturers of automatic sprinklers at the same session. This charge of 6 per cent., moreover, is, as was explained by Mr. Fenner, only "what the architect believes he should receive for his services." There is no definite agreement, as in other instances which Mr. Untermyer has brought to light, with graded penalties for the breach of it that run into the thousands and are capped by expulsion from the association. Mr. Fenner indicated clearly that architects might vary their charge upward or downward to meet exceptional conditions, and that in fact they do so.

Few things are more important to the stability and repute of a profession than a generally recognized code of ethics in all matters that are capable of an agreement. Lawyers frequently make charges far in excess of those of the American Institute of Architects. Physicians also have been known to take large fees; but they gladly practice gratis in hospitals, treat poor patients for nothing in their private practice, and renounce all patent right in professional inventions. In architecture, the need is for a gentlemen's agreement upon a definite rate that is dignified without being extortionate.

That young and untried members of the profession may sometimes find an advantage in undercutting the 6 per cent. rate is possible; indeed, Mr. Fenner admits that this actually occurs. But as soon as they feel able they ask the conventional rate and cling to it, not merely for the monetary profit, but to maintain their professional reputation. The value of this excursion of the Lockwood committee lies in the contrast it draws between reputable and disreputable practice in the building world.

The Guild System

NO less an authority than the editor of *The Architects' Journal* of London is disposed to doubt a rapid development of Guild building in England. In fact he believes and states that the movement contains within itself the germs of dissolution. Even granting, says the Journal, that the Guilds possess the organizing skill of trained master builders, it is not believed they will be able to maintain the team spirit essential to success. It appears to be a case of too many masters.

During the course of the meeting held on November 12, by the New York State Association of Architects, to discuss "What is the Matter with the Building Industry?" Mr. Ordway Teal of the Burueau of Research, spoke at some length as to the merit of the Guild System in England with reference to its adoption in this country. One of the principal reasons in favor of the Guild system as stated by Mr. Teal, was the failure of the private profit motive to interest the laborer in his work. Mr. Teal apparently believes that under a Guild there would result a "team spirit" which would increase efficiency and give the laborer a more intimate interest. But those abroad who have had opportunity to study the system at close quarters do not share that view.

The London *Westminster Gazette* of November 20 printed an article advocating the Guild System. It was that article which aroused the editor of *The Architects' Journal* adversely to criticize the system. Mr. Cole, the author of the article in the *Westminster Gazette* states: "The Guild leaders are relying on the fact that the Guildsman will feel that the Guild is his own concern, as he has never been able to feel when he has been working for a private firm. He will himself be member of the Guild and will be entitled to a share in its administration."

"Quite so," comments the *Journal*, "and this is exactly how the trouble begins. 'Too many masters,'

the toad said to the harrow. We stand awe-struck at the dreadful disillusions that are lying in ambush."

Under methods as established and practiced in this country, building has become the second largest of our industries. Its basic methods are efficient and the results are those of efficiency. From time to time we may have to "clean house" by calling on legislative and other investigating committees. And these investigations very clearly show in what direction labor takes the greatest interest in its work, particularly when thoroughly organized.

Building without profit, Guild systems, or any of the impractical things that are the play-toys of visionists and theorists, may be tried in Europe and we shall watch the progress of the experiment with considerable interest. But it is not believed that the building industry in this country, soon to resume activities greater than ever before, will seek to overturn our social and economic system merely to provide opportunity for experimentation.

A National Exhibition of Architecture

IT is a satisfaction to learn that the Board of Directors of the Institute has decided to make a national exhibition of architecture a permanent feature of all future conventions.

Those who attended the last convention were undoubtedly impressed by the exhibition that was hung on the walls of the Corcoran Gallery. This was in spite of the fact of its hasty assembling, a most enjoyable feature of convention week. With the time that may now be given to preparation, the forthcoming exhibition may well be made the most distinguished of the exhibition year.

A very valuable opportunity will be afforded to make a display that will be truly regional in its aspect or one that may accomplish the very good purpose of stimulating regional types of architecture. In commenting on the exhibition held at the last convention, this journal directed attention to the fact that ignoring the location of the various chapters as printed above their exhibits, it was not possible to determine their exact region by any local characteristic. Office buildings in Detroit were exactly like those in New Orleans. A New York City apartment house differed so slightly from one in Chicago that it was not possible to locate by reason of any regional attributes just where one or the other was placed.

We may not be able to change the plan of these or other types, owing to the insistence of clients, but we certainly can introduce into design, and particularly detail, such regional motives as would at once link the building to its section.

These convention exhibitions will undoubtedly become very valuable, and not the least important lesson that will be learned is the present similarity of detail treatment of our buildings and the artistic necessity for a more carefully studied designing that will create a proper local pride, and take a long step in the direction of the evolvement of regional types.

GATEWAY TO A FARM, SEINE ET OISE, FRANCE

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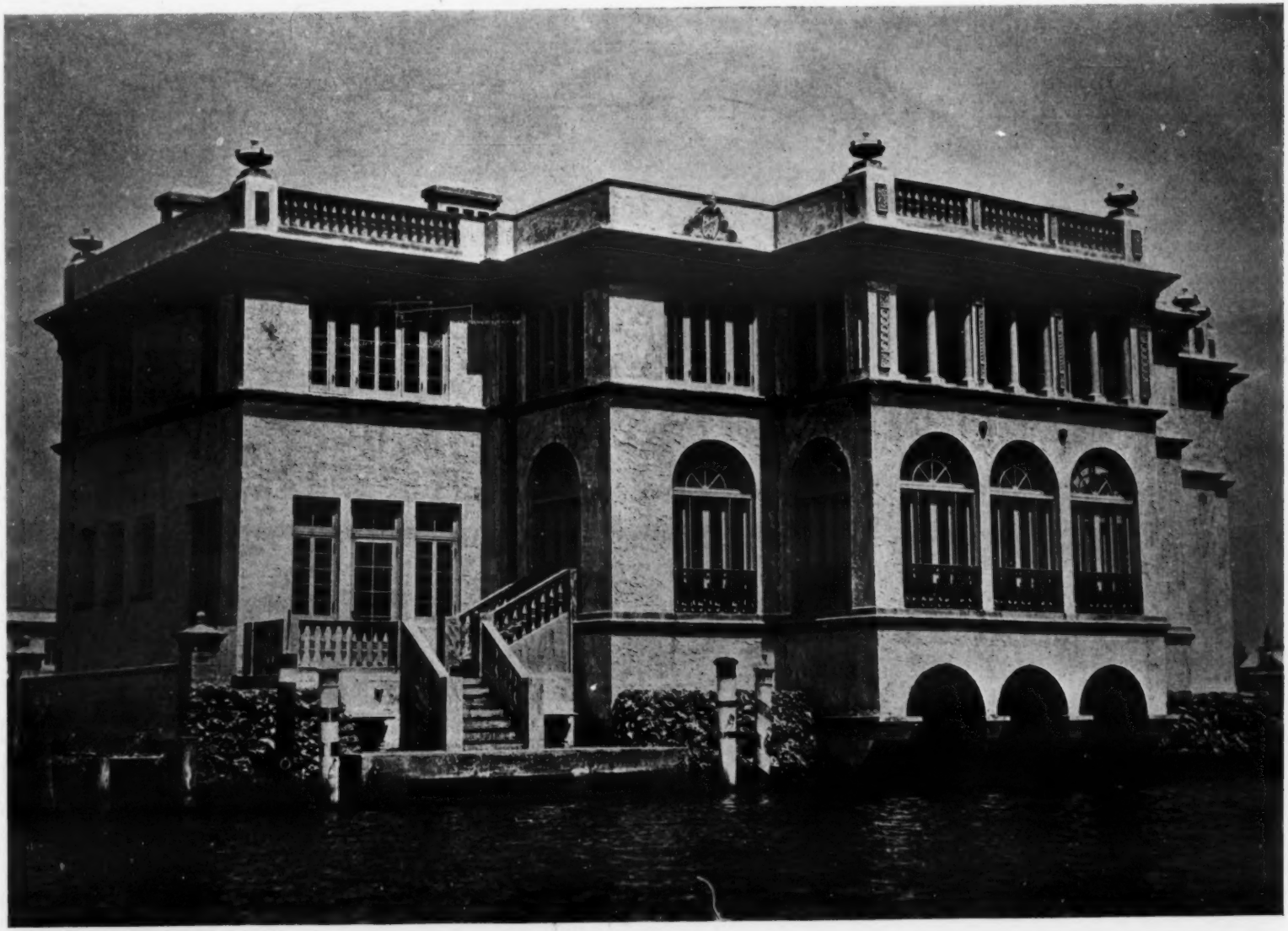
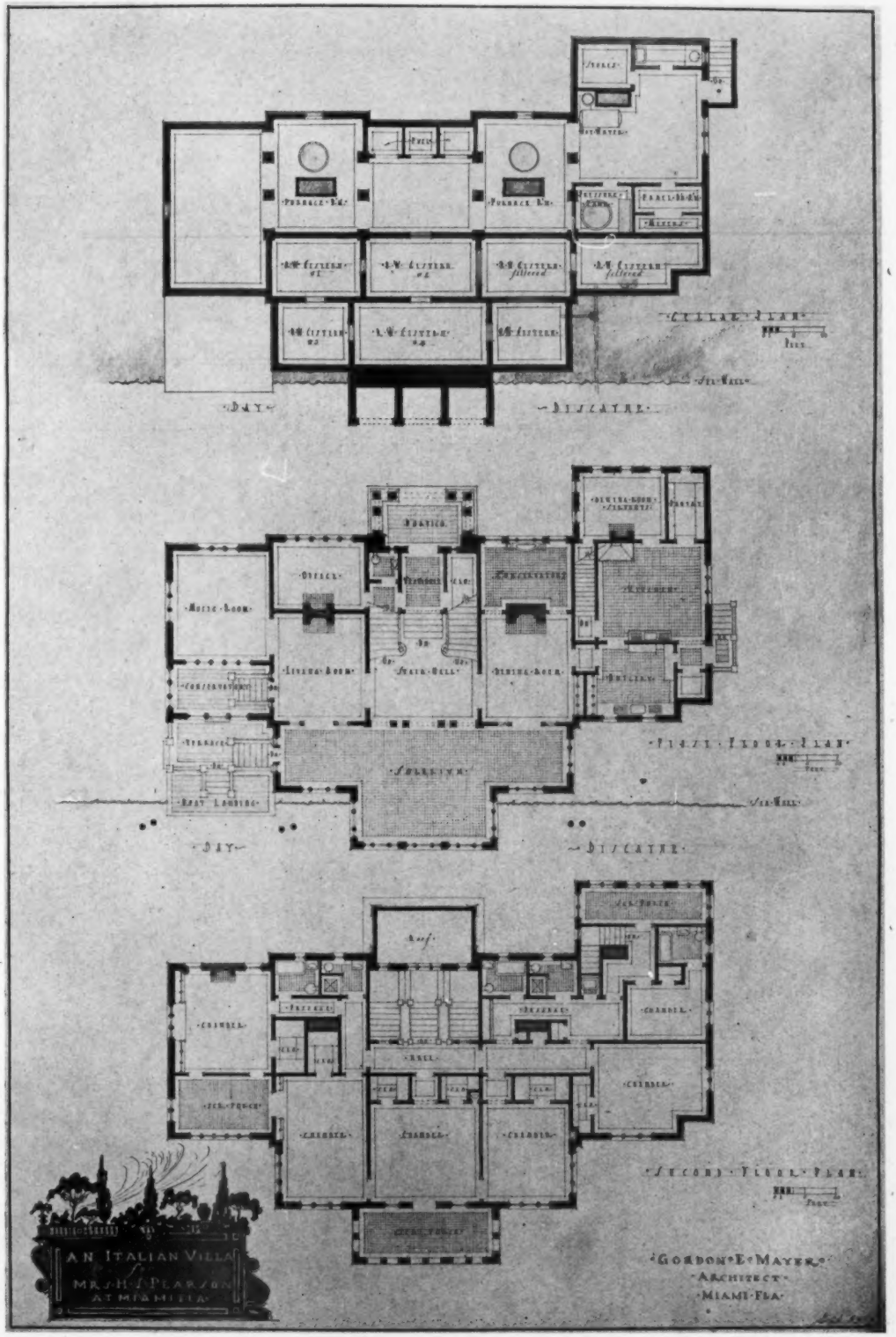


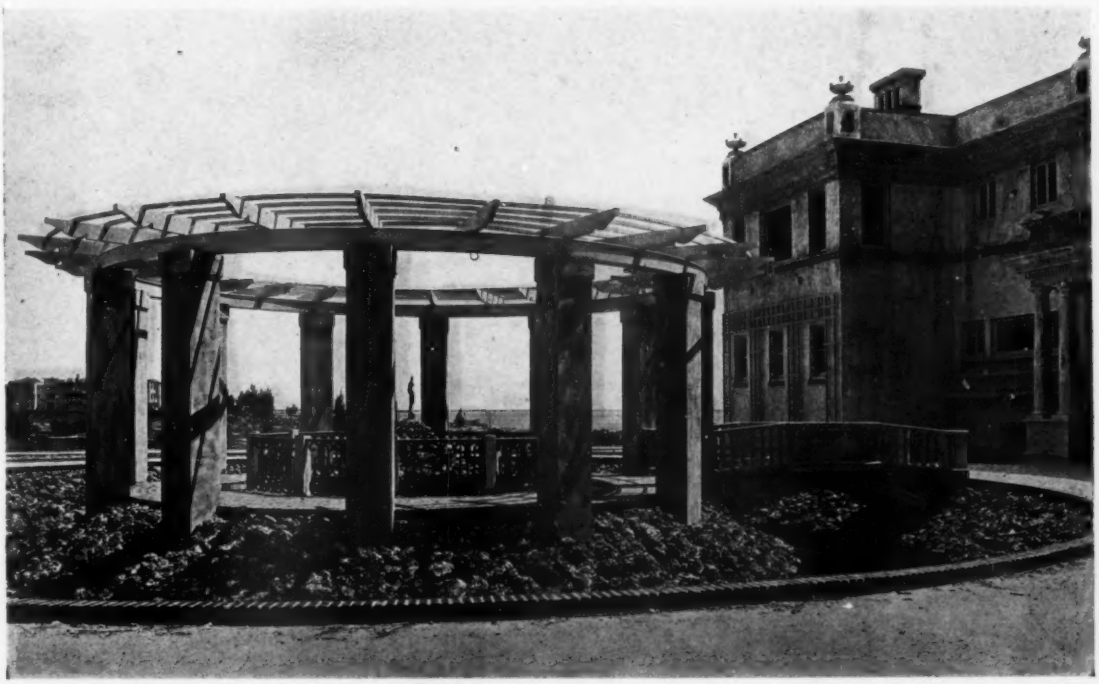
HOUSE OF MRS. HELEN S. PEARSON, MIAMI, FLORIDA

GORDON E. MAYER, *ARCHITECT*



GORDON E. MAYER, *ARCHITECT*

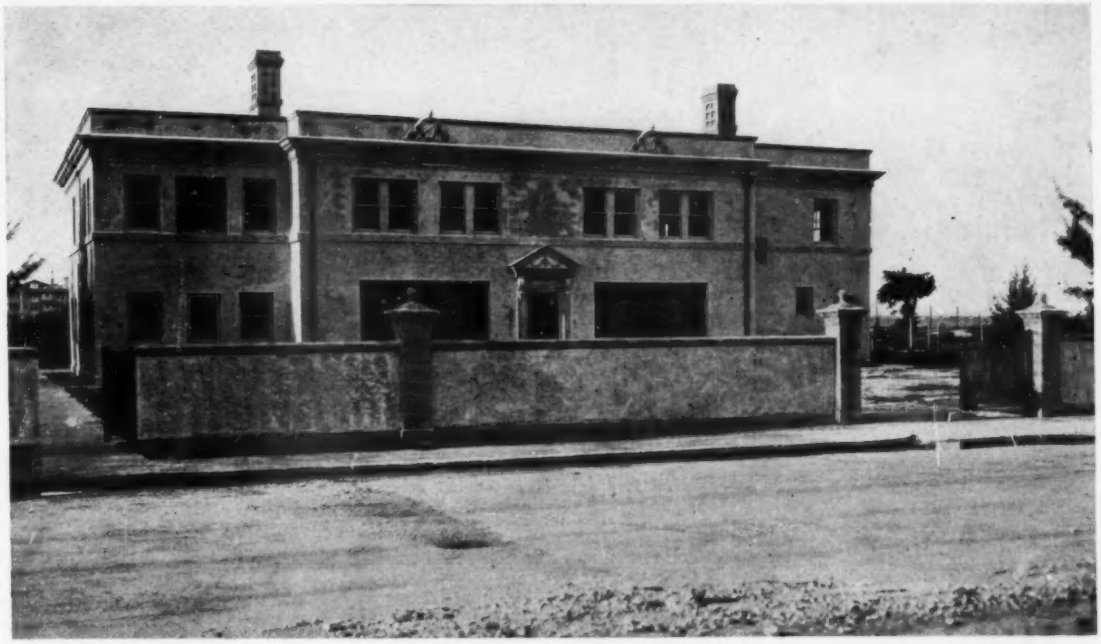
MAIN ENTRANCE FRONT



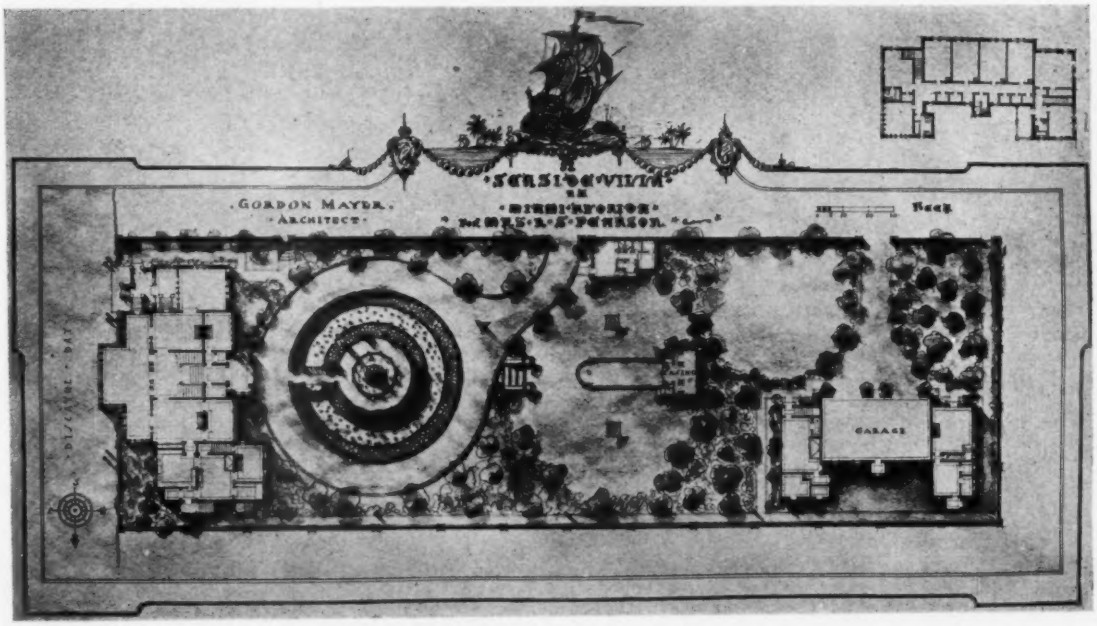
THE FOUNTAIN, PERGOLA AND BRIDGE

HOUSE OF MRS. HELEN S. PEARSON, MIAMI, FLORIDA

GORDON E. MAYER, *ARCHITECT*



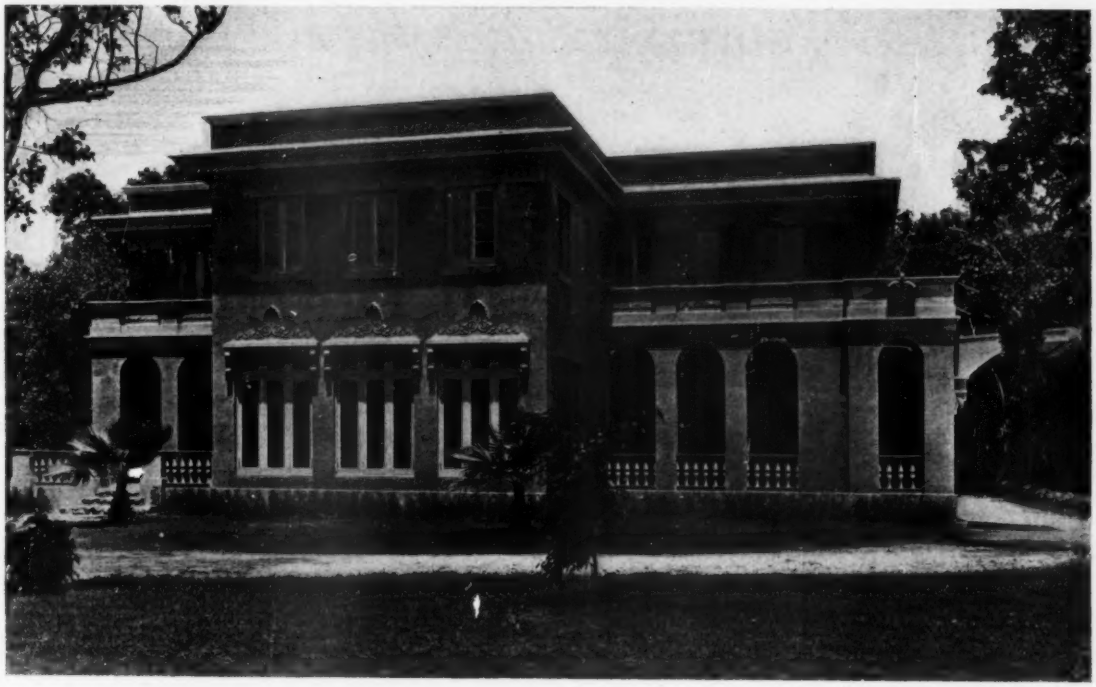
GARAGE AND SERVANTS' QUARTERS

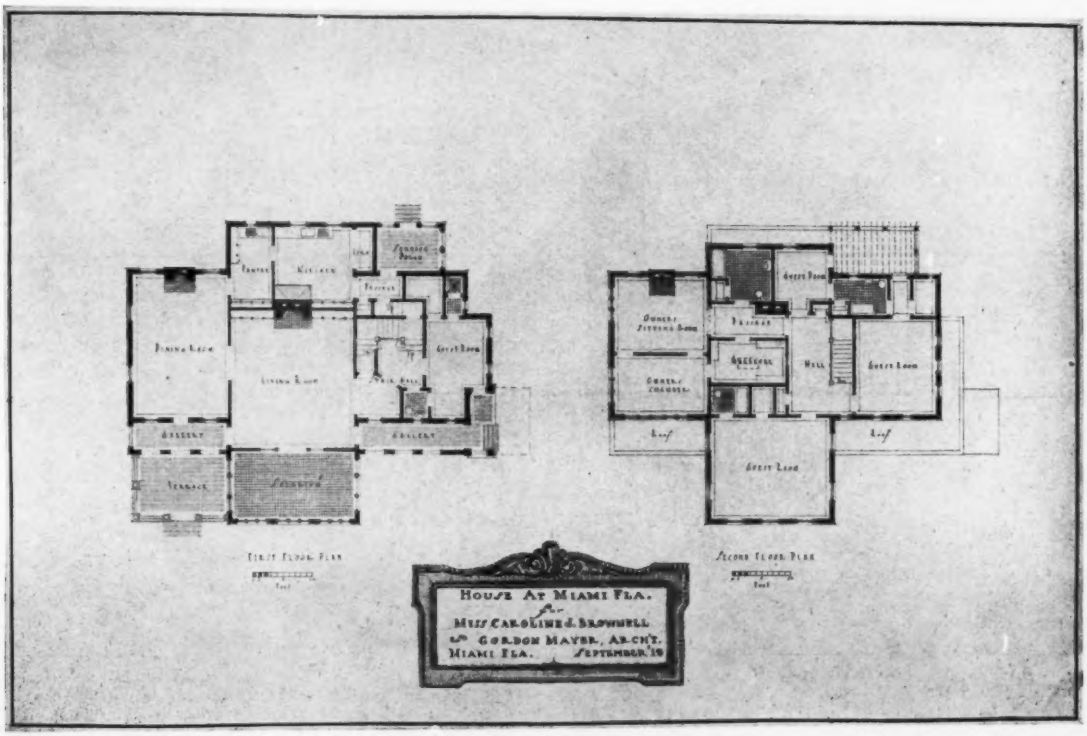


PLOT PLAN

HOUSE OF MRS. HELEN S. PEARSON, MIAMI, FLORIDA

GORDON E. MAYER, *ARCHITECT*





GORDON E. MAYER, *ARCHITECT*

The American Specification Institute

IN THE AMERICAN ARCHITECT, *issue of Nov. 17, there was printed an editorial outlining the proposed formation of an American Specification Institute. The end it was sought to attain by such an organization appeared so very desirable that the editors of this magazine believed they would be rendering an important service by as far as possible encouraging this effort.*

It is gratifying to learn through a series of letters from readers in every section of the United States, in response to this editorial and inquiries made, that a Specification Institute as proposed would perform a servce of great value to the profession and the public by increasing the efficiency of practically every building operation.

Following are extracts from a few of the many letters received.

I HAVE read with interest the editorial relative to the proposed new American Specification Institute in THE AMERICAN ARCHITECT of November 17, 1920.

It occurs to me that architects in the past have paid altogether too little attention to this important phase of their work, and too little opportunity for development has been given to those men who are engaged in specification writing. The result of this has been that often our well-conceived projects have been poorly constructed, and proper provision has too often not been made to protect various materials in the proper manner. It seems, therefore, that anything we can do to encourage men to enter the field of specification writing will in time render a very great service to the architectural profession generally.

I congratulate THE AMERICAN ARCHITECT upon being a pioneer in this movement, and assure you that we shall do everything possible to co-operate and assist in the future developments of this organization.

H. KENNETH FRANZHEIM.

Chicago, Ill.

* * *

In reply to your letter of the 24th instant, I believe the formation of a Specification Institute would be of great service to the architects, especially to the smaller offices not employing special specification writers. I agree that the specification practice of most architects offices is the least creditable part of their work, due probably to several things: First, the fact that by the time the drawings have been approved the owner wants to start work at once, and in an effort to hasten the work, old specifications for similar buildings are often rehashed and made over with a greater or lesser degree of success, mostly less. Secondly, specifications are to the majority of architects the least interesting part of their work, the very essential to the best interests of their client. . . .

While forming the basis of the contract, I believe, we should establish a precedent for simplicity and brevity, bearing in mind the mental capacity of some of the people who have to follow the specifications, rather than follow the method of the legal profession in preparation of agreements or legal forms, which I have been told is the outcome of the days when lawyers were paid according to the number of words embodied in a contract. Most legal forms and papers would seem to substantiate this, at any rate.

Personally, I would be very glad to subscribe to such a service. It is something I have often felt the need of, and I am sure would receive support from all small progressive offices, especially those not located in the large cities, but even there it would be more convenient than the present facilities at the disposal of the architects. It would mean that for a comparatively small sum, individually, by co-operation, the small office could have the continuous services of experts in specification writing.

An old subscriber.

* * *

I have read your editorial of November 17, entitled "The American Specification Institute," and I heartily favor such a movement, having been a member of the old Building Data League, and was much distressed when they ceased operations.

The value of such an institute, as I see it, would lie principally in getting together and classifying for easy reference the different qualities of building materials, so that the specification writer can find the material that he wants without searching through a vast amount of straw.

If I can be of any service in the movement, let me know.

J. DE BRUYN KOPS.

Savannah, Ga.

* * *

I am heartily in accord with the project of establishing a Specification Institute if it is, as its name implies, for the purpose of educating specification writers.

Most specification writers receive their training at the present time solely in the school of experience, which is, of course, excellent, but does not cover the entire ground, for the reason that these men are usually the product of training of one or two offices which have their individual methods. Such

XUM

an institute, I take it, would have evening classes for the benefit of men regularly employed, as well as classes for younger men who perhaps can devote time to a more comprehensive study.

I believe, also, that an open forum both of the assembly and correspondence type, would be of great value, as perhaps in this way these men would be enabled to pull themselves out of the rut that every man is bound to get into without interchange of ideas with others doing the same kind of work.

Wm. O. Ludlow.

New York.

* * *

As the specification writer in the above office, I read with interest your editorial in the November 17 issue, referring to the initiation of a movement to form an organization termed the American Specification Institute. . . .

Specification writing is a field which is gradually receiving increased attention and research, as necessitated by the intricacies of modern architectural practice, but which is still in need of the best efforts of the entire profession.

Walker & Weeks,
Per Frank W. Reynolds.

Cleveland, Ohio.

* * *

Your editorial on Specification Writing is very opportune and we believe such a course of study would prove invaluable.

The average architect beginning practice to-day knows very little about this most important phase of his work.

He little knows how much stress a client will put on his knowledge of stone and concrete; the grades of lumber; the most efficient kinds of paint for various purposes; what constitutes the various grades of glass; plumbing goods; hardware and electrical work.

The architect to correctly specify must know these things intelligently and intimately so that he may not only be in a positoin to advise the client but to advise the builder if necessary.

To make specifications concise and intelligent is as you say another problem to be solved. A start in this has been attempted in this office by listing the items under the various headings more like a bill of materials, with all the preliminary ands and ifs and buts at the head of the page. Both for purposes of estimate and constructive purposes, this venture was successful although the specification was not as complete as we would like to make it.

We feel that architects in general would stand much higher in the estimate of the client and that the reasonableness of the fee would be conceded if we were all thorough along the lines mentioned.

Architecture is the art of building thoroughly even as much as making buildings attractive.

Philadelphia. Heacock & Hokanson.

* * *

In reply to your esteemed favor of November 24, we beg to say that we approve of any effort on the part of agencies for the advancement of our profession and accordingly approve the "American Specification Institute" provided such an agency is for the purpose of making clear the importance of specifications and of making men's minds in the profession competent and capable to take more of the idea.

We, of course, do not approve of any institution that would seek to standardize so important a document as a specification, because we believe that personality and creativeness enter as much into this branch of the architect's work as in matters of design and execution of drawings. We do not believe that you can make specification specialists because we believe the specification maker must be imbued with all the art and questions of accomplishing a building and it is a subject as intimate as the architect himself.

We do feel that greater importance should be attached to this subject and that it is a fine field for the agency you refer to offer its note of culture to the profession.

Atlanta, Ga. Edwards & Sayward.

* * *

We have read the editorial in your issue of November 17 with considerable interest. We do not believe that, today, specifications are considered a minor part of the architect's or engineer's contract. Up to about ten years ago it was the custom of a great many architects and engineers to slight the specifications, as their importance was not recognized at that time. We believe today, however, that the most reputable architects and engineers realize that specifications play as important a part in the contract as the plans, and considerable time and thought are spent in endeavoring to write specifications that will be clear and concise.

We agree with you that it is not uncommon for a question to arise which has apparently not been taken care of in the specifications. In most cases of this kind, however, the trouble is due not to ignorance or inability to write specifications, but is rather due to lack of experience or else carelessness.

We believe a Specification Institute would prove of considerable value, if properly conducted. We would suggest that the manufacturers of various products, as well as contractors and builders, be approached, in order to obtain all the information available.

F. P. Sheldon & Son.

Providence, R. I.

DEPARTMENT OF ARCHITECTURAL ENGINEERING

The Metropolitan Annex, New York City

D. EVERETT WAID, *Architect*

THE growth of the life insurance business is nowhere more strikingly illustrated than by the example presented in the expansion of the Metropolitan Life Insurance Company's home office, New York City.

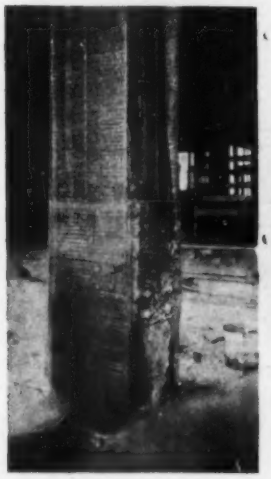
In 1892 the original building on the northeast corner of Twenty-third street and Madison avenue was erected. This is eleven stories in height, with a frontage of 425 feet on Twenty-third street and 197 feet 6 inches on Madison avenue.

In the course of time more room was needed and at various periods the building was extended to Fourth avenue, the main building finally taking up the entire block frontage from Twenty-third to Twenty-fourth streets on Fourth avenue. At that time the southeast corner of Twenty-fourth street and Madison avenue was occupied by the Madison Avenue Presbyterian Church, a brownstone edifice erected many years previous. However, the growth of this life insurance company seemed so rapid that negotiations were later entered into with the church authorities for the purchase of their property. These negotiations resulted in the transfer of the property, and the church, shortly thereafter, moved across the street to a new edifice, built according to the design of McKim, Mead & White. On the site of the former church building, the 48-story Metropolitan Tower, of which N. Le Brun & Son were architects, was soon reared. This squared out the entire block bounded by Madison and Fourth avenues, Twenty-third and Twenty-fourth streets, a ground area of 200 by 550. To furnish additional office space another building was erected on Twenty-fourth street, across the street from the main building, and adjoining the new Madison Avenue Presbyterian Church.

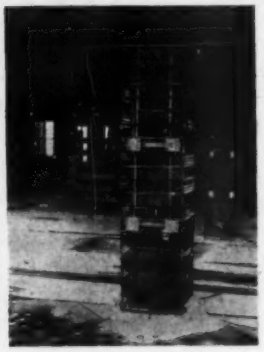
THE METROPOLITAN ANNEX, NEW YORK CITY
D. EVERETT WAID, *ARCHITECT*

But the steady growth of the company continued and finally the new church followed its predecessor, and today on that site the Metropolitan Annex is now nearing completion. This building is 16

and in part 18 stories in height, plus two stories below ground, and 75 x 225 ft. in ground area. The Metropolitan Life Insurance Company now employs over 5,000 persons in its home office, and has but recently constructed its own printing building at Long Island City, N. Y. This structure contains 9 acres of floor space.



Inner Wrapping of Metal Lath



Outer Wrapping of Metal Lath

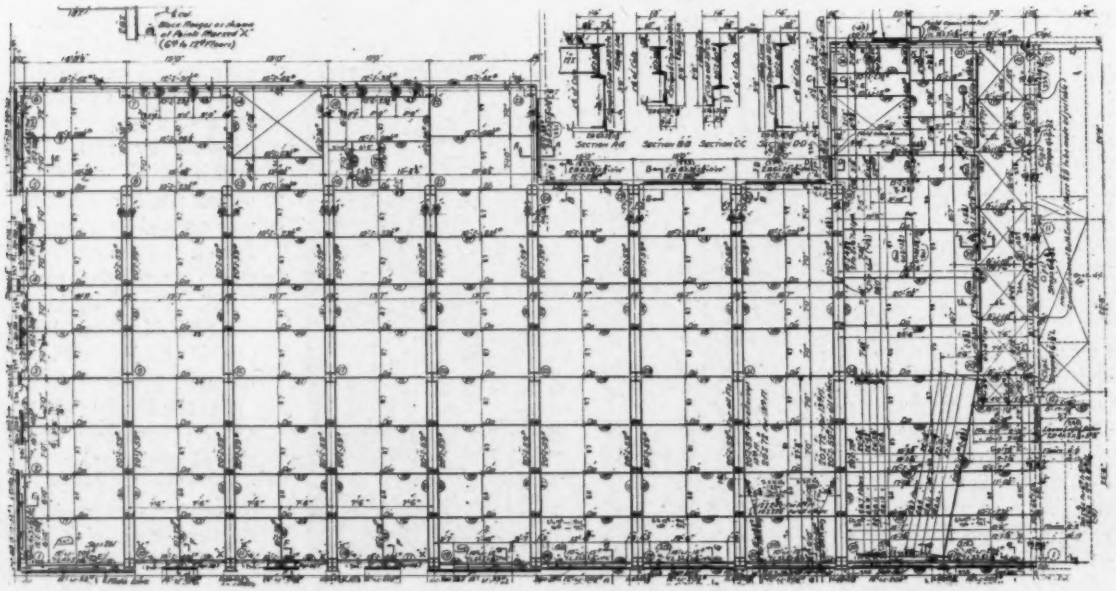
Method of Fireproofing Columns. Space Between Metal Lath Filled with Concrete.

The new Metropolitan Annex, illustrated in this article, has many features of interest.

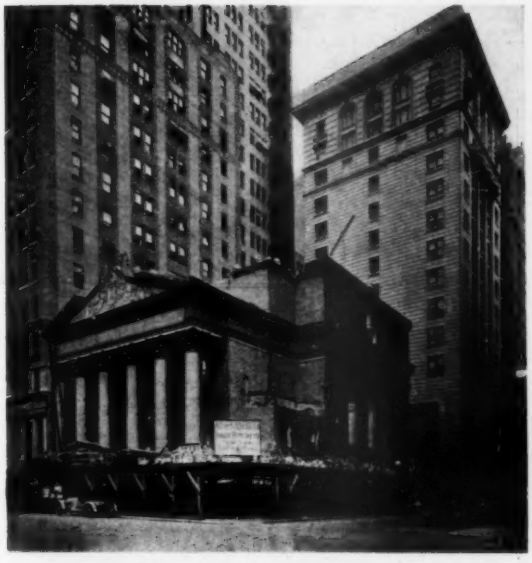
It will be noted from one of the illustrations that the church structure was supported on a wood pile foundation. For the new building excavation was carried to rock, the level of which was about 25 ft. below curb. The interior columns rest on steel grillages. Below the sidewalk level, the excavation was carried out to the curb line on the two street fronts. The sub-basement level is 26 ft. 4 in. below curb. The outside 4 inches of the retaining walls are of brick, and between this and the main wall, which is of concrete between vertical steel beams, is placed a membraneous waterproofing. This waterproofing is carried through the base of the wall to connect with the sub-basement floor waterproofing. Just inside the wall line, and below the concrete floor and waterproofing, a 4 in. tile drain is laid for sub-surface drainage. This is connected to a pump whence it is pumped to the street sewer, thus preventing pressure under the waterproofed sub-basement floor.

Diagonal "X" bracing is placed between the side wall columns and the first row of interior columns in both the sub-basement and basement stories, as shown in the wind bracing diagram.

The sub-basement and basement will be devoted chiefly to storage purposes. The main entrance to the building is at the easterly end, on Twenty-fourth street. A bank of six electrically driven elevators of the overhead 1 to 1 traction type is provided. The entire first floor, with the exception of the entrance hall, is laid out as an auditorium. The main floor has a seating capacity of 784 persons, and the balcony (second floor level) will seat 276 persons additional, a total of 1,060 seats in all. A double set of windows provides insulation against street noises, and the sub-

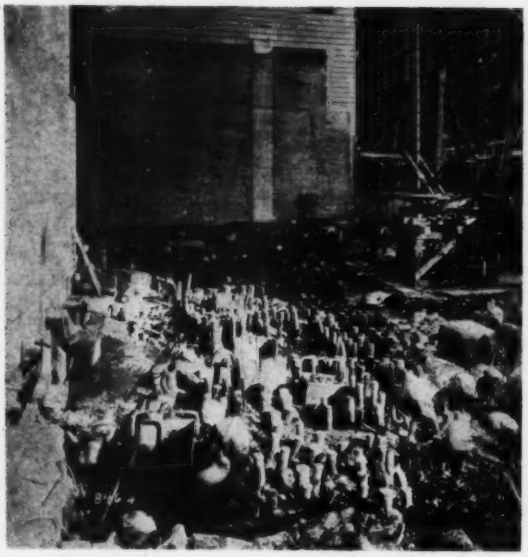


TYPICAL FRAMING PLAN FOR UPPER STORIES



SITE OF THE NEW METROPOLITAN ANNEX

Demolition of Madison Ave. Presbyterian Church in progress.



CHURCH EDIFICE ENTIRELY REMOVED

Site was excavated to rock and all old piling removed.

ject of ventilation for this auditorium has been gone into as carefully as in the case of the largest theatre. A positive supply and exhaust system has been installed. Along the basement ceiling, that is, below the auditorium floor, which is on a pitch, four longitudinal ducts, one under each of the outside blocks of seats and two under the central blocks, are placed. Each duct distributes fresh air under the seats through slightly over 100 mushroom ventilators. These longitudinal ducts connect with a header just below, and on line with the front of the stage, which in turn is provided with fan, heating chamber and fresh air intake. During mild weather air can be circulated at the normal outside temperature, while

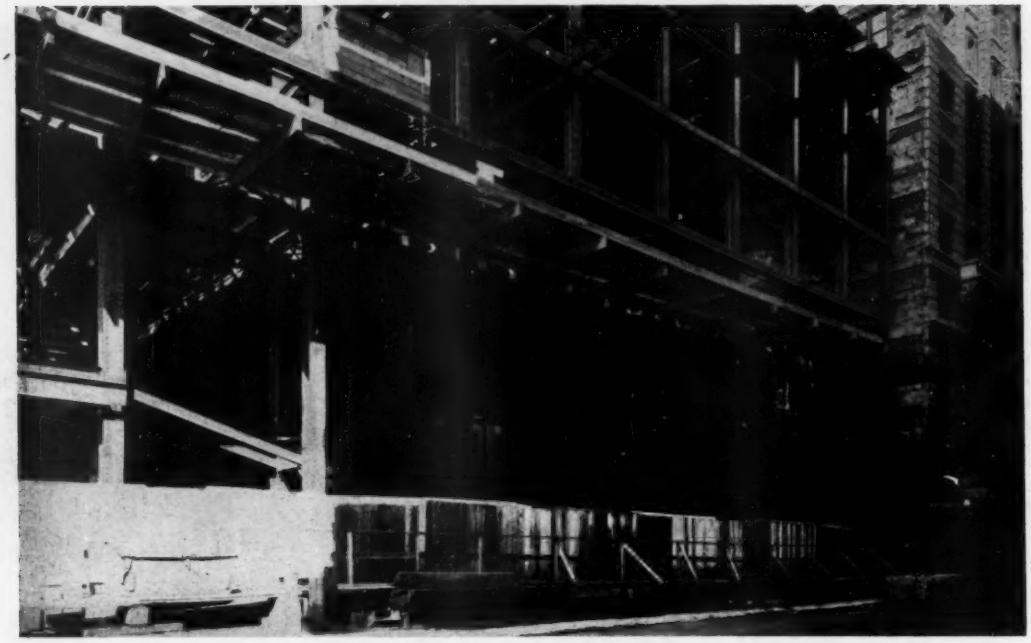
STEEL ERECTION IN PROGRESS

Compare adjoining structure at rear with similar view above.

PROGRESS VIEW

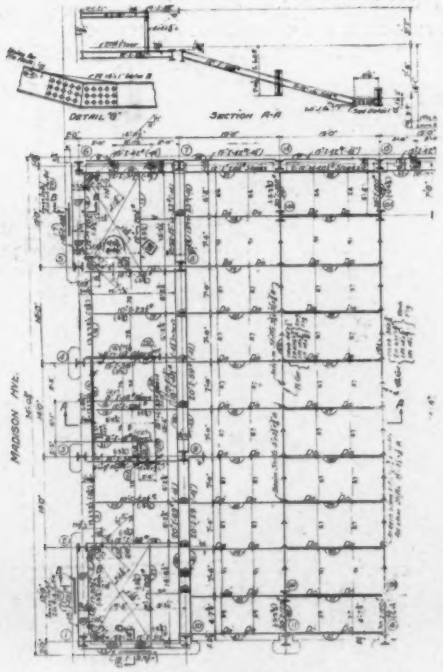
Street walls are faced with white marble.

XUM



PROGRESS VIEW. SLOPING STEEL WORK FOR BALCONY CAN BE SEEN AT THE LEFT

during cold weather, the air will first be heated to the proper temperature by passing through the heating chamber before reaching the distributing ducts.



BALCONY FRAMING PLAN

Two main stairways, located at opposite ends of the building, extend from basement to roof.

A girder at front of gallery spans the width of the building, leaving the space beneath the gallery clear of columns, as shown on the balcony framing plan.

Probably the most interesting feature of the construction is the placing of trusses in the third story, to carry a central row of columns from fourth floor to roof and omitted below in the auditorium. Thirteen stories as well as a two-story pent house extend above the top of trusses. The heaviest individual column loads brought down to the trusses is approximately 600 tons, occurring at columns 28 and 31.

A detail drawing of one of the trusses is shown on page 832. The span is 56 ft. 8 in., and the height, center to center of chords, is 11 ft. 10 in. The web members are so arranged as to permit of a door at the center between the vertical members DA7 and DA8. Horizontal "X" bracing was used between each pair of trusses, as shown on the third floor framing plan. Similar bracing occurs at the fourth floor also.

The third story in which the trusses occur will be occupied as a filing room, the files being arranged in the rooms between trusses. These rooms are connected by the openings at the center.

The method of fireproofing the trusses is interesting, in that the fireproofing forms an enclosing partition as well. Metal furring bars were placed

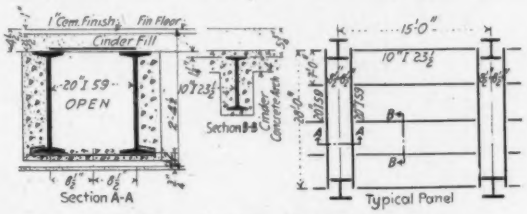
on either side of each truss. Metal lath was wired on both sides of the furring bars and the space thus formed between the sheets of metal lath was poured full of cinder concrete, forming a concrete protection, when finished, 2 in. thick.

One of the offset columns, Col. 34, is supported at the third floor level by a heavy double plate girder having a span of 42 ft. This girder frames between Cols. 33 A and 35, and is 5 ft. 6½ in. deep. At the point of maximum bending moment (under Col. 34) the upper and lower flanges of each girder are composed of two 8 in. by 6 in. by 1 in. angles; 2 flange plates (vertical), 16 in. x 1 in. and four cover plates, each 16 in. x ⅞ in. The web plate is 1⅛ in. thick. Due to the thickness of these plates and angles all holes had to be drilled, as punching was out of the question. The detail drawing of one girder is shown on page 833. The other girder is the same, except reversed. Column 34, which the double girder carries, brings down a load of over 700 tons.

The New York building code requires wind pressure to be figured on all buildings over 150 ft. in height, and on all buildings or parts of buildings in which the height is more than four times the minimum horzontal dimension. This wind pressure is taken at 30 lbs. per sq. ft. of exposed surface, measured from the ground to the top of the structure. While wind stresses must be computed, a further paragraph provides that when the stress in any member due to wind does not exceed 50 per cent. of the stress due to live and dead loads, the working stresses prescribed may be increased by 50 per cent. in designing such members to resist the combined stresses.

In the Metropolitan Annex it was possible to take care of the wind stresses at each story by the arrangement of the double cross girders, consisting of 20 in. x 59 lb. I beams, and the special connections, details of which are shown on the sheet with the wind bracing diagram. The floor girders did not have to be increased in section in any case to take care of the wind stresses.

The design of the steel framing on this building is worthy of careful study. It is not always possible to

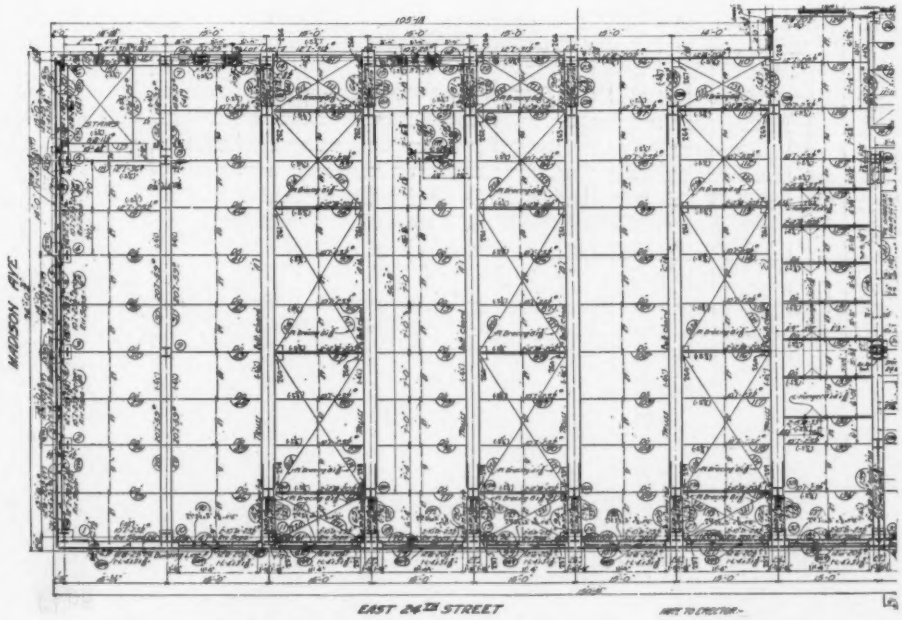


TYPICAL FLOOR CONSTRUCTION

work out an arrangement of joists and girders which, while accommodating themselves to the column layout, are at the same time fully stressed to their safe carrying capacity. In other words, the arrangement is often such that one size beam is under and the next commercial size is stronger than necessary, yet the latter must be used for safety.

The floor loads used in the computations for a typical bay of the floor framing are given in the following table. A drawing showing the typical floor construction appears above. A typical framing plan is shown on page 828.

These figures are the average value over the entire area supported by the girders, and not the actual square foot figures.



PORTION OF THIRD FLOOR FRAMING PLAN, SHOWING LOCATION OF TRUSSES AND DOUBLE-PLATE GIRDER

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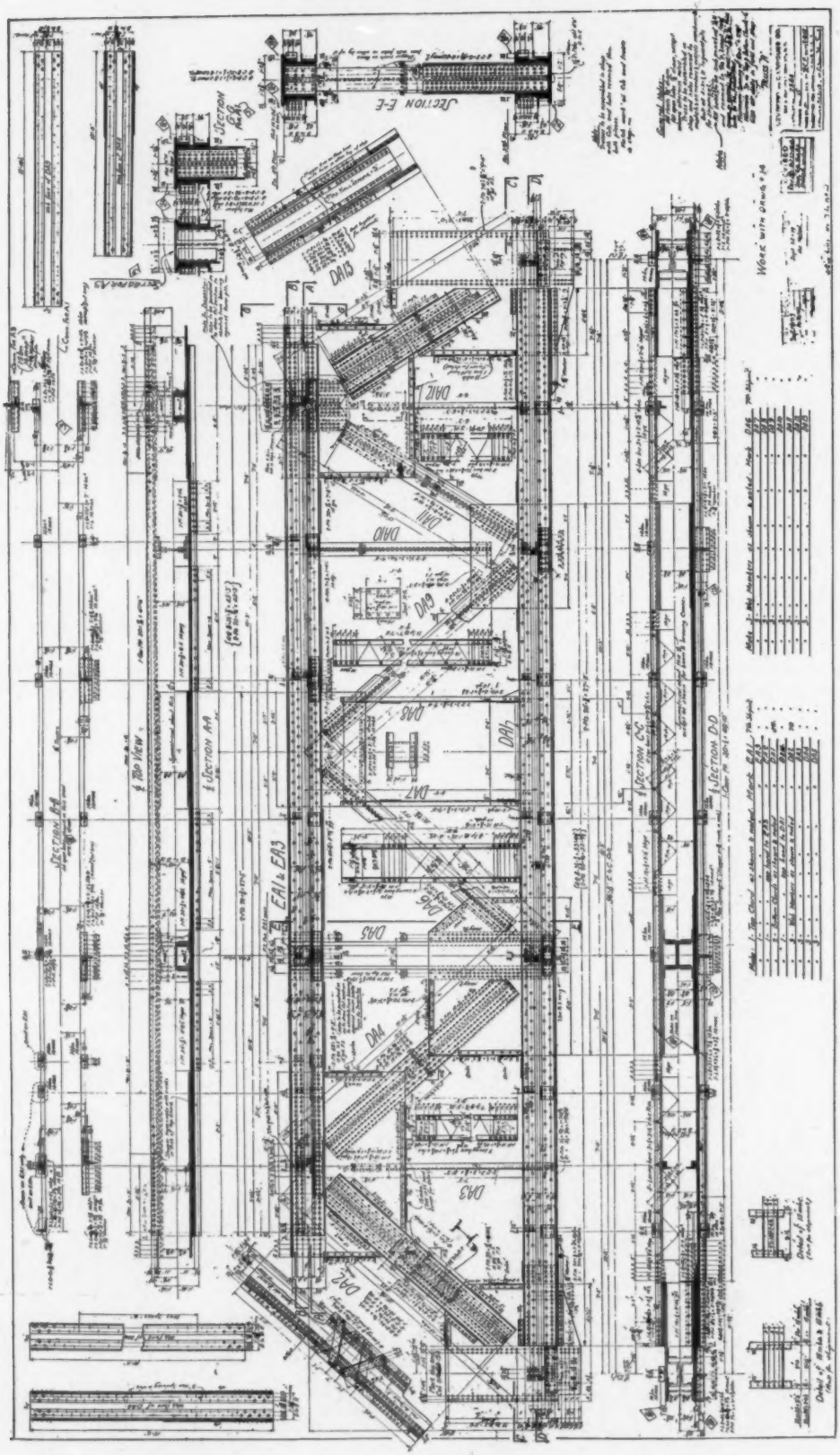
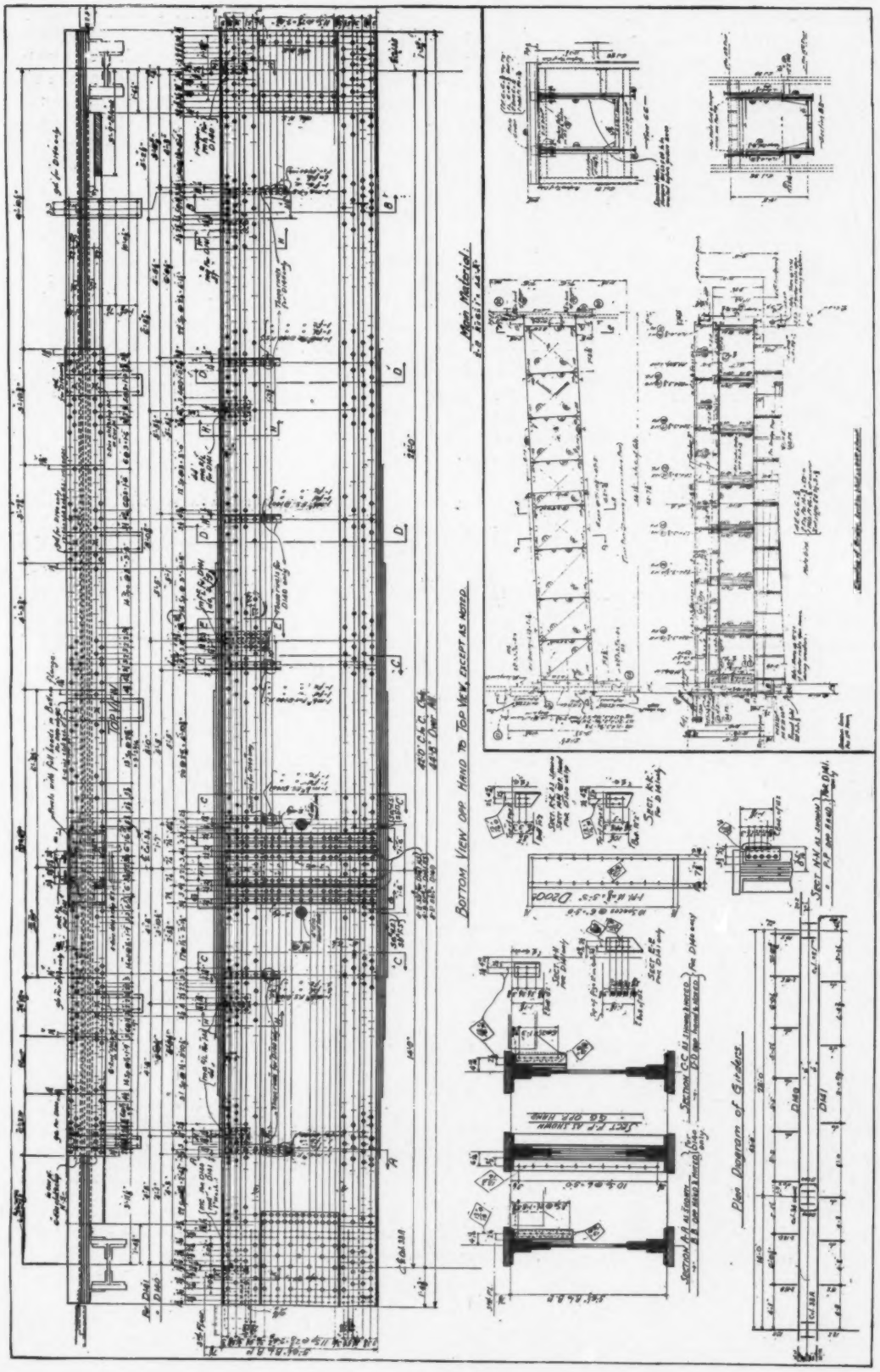


DETAIL DRAWING OF ONE OF THE TRUSSES OVER THE AUDITORIUM.
THE METROPOLITAN ANNEX, NEW YORK CITY
D. EVERETT WAID, *ARCHITECT*



DETAIL DRAWING OF PLATE GIRDER CARRYING COL. 34 ABOVE THIRD FLOOR LEVEL.
Insert in lower right hand corner shows construction of connecting bridge at 12th story.

THE METROPOLITAN ANNEX, NEW YORK CITY
D. EVERETT WAID, *ARCHITECT*

XUM

THE METROPOLITAN ANNEX.
Loads Used for Girder Computations.

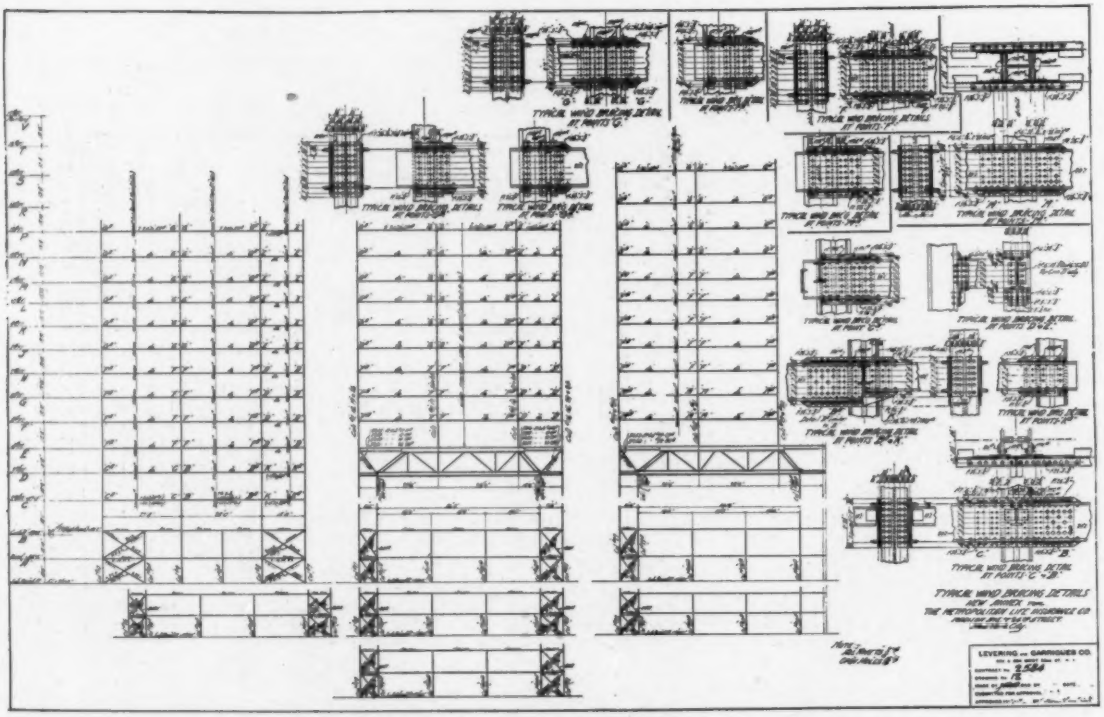
	Lbs. per sq. ft.
1 in. Cement finish	12
3½ in. Cinder fill	17
4 in. floor arch	30
Beam	3
Beam haunch	7
Furred Ceiling	10
Girder	8
Girder haunch	13
Dead Load	100
Live Load	120
Total Load	220

For beam computations those items relating to the girders in the above list were omitted. The average sq. ft. values of some of the other items are, of course, slightly higher, resulting in a beam design total load of 206 lbs. per sq. ft.

It will be noted that by using the double girders the span of the beams is reduced 1 ft. 5 in., thus permitting a lighter I beam than if a single girder had been used. With a single girder framing on the column centers, knee braces or special steel "plate and angle" knee connections would have been necessary to take up the wind stresses, whereas with the double girders, such connections were simplified. These connections, however, were specially designed to take up the secondary wind stresses, which, of course, required a greater degree of stiffness and, therefore, additional rivets above what would have been required to take the vertical reaction only. It will be noted that the girder bending moment, due to accumulated wind loads, runs as high as 323,000 ft. lbs. at the second floor level for the girder between Cols. 8 and 9. (See wind bracing diagram).

Connecting the steelwork of the new Annex to that of the adjoining easterly structure involved a large amount of field work—drilling, cutting, etc. The steel work of the older building was erected by Levering & Garrigues Company, who were awarded a similar contract for the new building. The original detail drawings of the column, girder and other connections of the older building were still in the files of this company, and by consulting these it was possible to detail accurately the new steel work which connected with the columns and girders of the existing building.

In the photograph showing the demolition of the Madison Avenue Presbyterian Church, this older building is shown in the background. It will be seen



WIND BRACING DIAGRAM AND TYPICAL WIND BRACING DETAILS

that the wall toward the church site is faced with marble ashlar. After the erection of the new annex, this wall became merely a division wall, and for that reason the marble ashlar was entirely removed. This is clearly indicated in the photograph showing several tiers of steel erected. Due to the stripping of this marble facing, the old wall girders were relieved of a considerable load, thus permitting their carrying the load from floor framing of new building.

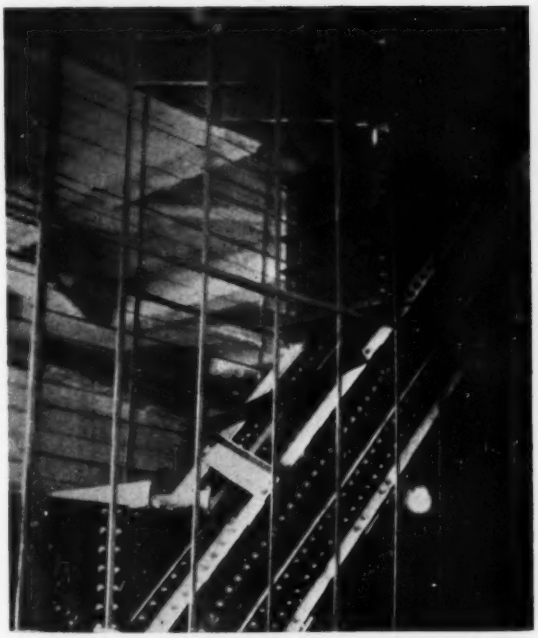
At the fourteenth floor, heavy plate girders in the wall of the existing building carrying offset columns had to be materially altered and lowered to fit in with the new arrangement, since these girders were located at a different level from the new framing.

Since the Annex is really an extension of the main building, on the opposite side of Twenty-fourth street, a connection between the two was a desirable feature. This has been accomplished by a connecting bridge over Twenty-fourth street, at the twelfth floor level. This bridge is constructed on two plate girders, carefully protected with concrete fireproofing, and covered with copper.

In order to erect such a bridge over a public highway favorable action by the Board of Estimate and Apportionment is required. The structural details of this bridge are illustrated in one of the drawings. It can also be seen in the drawing of the completed building.

Both materials and workmanship throughout are of the highest quality. The street walls are faced with marble.

The auditorium is designed to be an attractive con-



METHOD OF FIREPROOFING STEEL TRUSSES

STEEL ERECTION IN PROGRESS ON METROPOLITAN ANNEX

Note horizontal "X" bracing in place between lower chords of auditorium trusses, also heavy plate girders. Stripping of stone ashlar on adjoining building is plainly visible.

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vention and lecture hall, provided with comfortable opera chairs, 1,060 in number, and with a moving picture equipment. There are coat and toilet rooms for the public below the Madison avenue lobby, and retiring rooms for speakers near the platform.

The entrance to the upper part of the building is on Twenty-fourth street, east of the auditorium. Elevator halls are floored with Tennessee marble and wainscoted with glass. The several stories are to be used in large, undivided spaces for clerks, and lighted by means of semi-indirect chandeliers. Floors generally are terrazzo, the marble screenings being a mixture of white Italian and white Alabama marble. Toilet rooms have tile floors and white glass, W. C. stalls and wainscot.

Windows at the rear are all of rolled steel of the austral pivoted type. Street front windows are double hung copper kalamein, and all windows are glazed with wired plate glass.

The roofs are covered with red tile. Skylights and flashings are copper. The flag pole is built of several cylindrical steel tubes with a tapered effect.

The building was designed by D. Everett Waid, architect. The George A. Fuller Construction are the builders.

Decisions Rendered By the National Board for Jurisdictional Awards

November Meeting

Tile and Porcelain Bathroom Accessories

[Subject of dispute between the Tile Layers and Plumbers.]

Decision—In the matter of the controversy between the Tile Layers and Plumbers over setting and alignment of tile and porcelain bathroom accessories, it is decided that all bath and toilet room accessories made of clay products, built in tile-faced walls, shall be the work of the tile setter.

Concrete Columns, Foundations, Engine and Machinery Beds

[Subject of dispute between Bricklayers, Hod Carriers and Plasterers.]

Decision—In the matter of the jurisdiction over foremen on concrete columns, foundations, engine and machinery beds, as contested by the Bricklayers, Hod Carriers and Plasterers, it is the decision of the Board that the work shall be done by the laborers under the supervision of such skilled workmen as the employer may designate.

Bishopric Board

[Subject of dispute between Lathers and Carpenters.]

Decision—In the matter of the dispute over the installation of Bishopric Board when applied as a substitute for lath, it is the decision of the Board that the work shall be done by the Lathers; where the same is used for sheathing it shall be the work of the Carpenters.

Flaxlinum Keyboard and Insulation

[Subject of dispute between Lathers and Carpenters.]

Decision—In the matter of the dispute over the installation of Flaxlinum Keyboard and Insulation, it is the decision of the Board that when the same is used as a substitute for lath or when any plastic material is to be applied that the work shall be done by the Lathers; when Flaxlinum is used as insulation or sheathing it shall be the work of the Carpenters.

Metal Floor Domes

[Subject of dispute between the Sheet Metal Workers, Lathers and Carpenters.]

Decision—In the matter of the controversy between the Sheet Metal Workers, Lathers and Carpenters over metal floor domes, it is decided that the placing of metal floor domes, whether temporary or permanent, whenever supported by wood props, or other wood supports and used as forms for concrete construction, come within the jurisdiction of the Carpenters.

Metal Forms for Concrete Columns

[Subject of dispute between the Sheet Metal Workers, Carpenters and Iron Workers.]

Decision—In the matter of the controversy between the Sheet Metal Workers, Carpenters and Iron Workers over metal forms for concrete columns, it is decided that the setting of of such forms of No. 10 gauge metal or lighter is the work of the Carpenters and when heavier than No. 10 gauge it is the work of the Iron Workers.

Electrical Work on Signal Systems, Fans, Telephones, Etc.

Decision—The electrical work involved in the installation of signal systems, fans, telephones, electric light fixtures and illuminated thresholds, and electrical interlocking devices, except on automatic elevators, and feed wires to the controller, is awarded to the Electrical Workers.

Hollow Metal Doors and Trim

[Subject of dispute between the Sheet Metal Workers and Carpenters.]

Decision—In the matter of the controversy between the Sheet Metal Workers and Carpenters over hollow metal doors and trim, it is decided that the hanging of such doors, except sliding doors, the installation of the door frames, the placing of the trim around door or other openings and the placing of all other metal trim, is the work of the Sheet Metal Workers whenever the metal is of No. 10 gauge or lighter.

Hollow Sheet Metal Window Frames and Sash

[Subject of dispute between the Sheet Metal Workers and Carpenters.]

Decision—In the matter of the controversy between the Sheet Metal Workers and the Carpenters over hollow sheet metal window frames and sash, it is decided that the setting of hollow metal window frames and the hanging of hollow metal sash, when such frames and sash are made of No. 10 gauge metal or lighter, is the work of the Sheet Metal Workers.

Lime Mortars at Own-Your-Home Exposition

Lime mortars will have a prominent place at the Own-Your-Home Exposition in Chicago and New York this winter. Large centrally located spaces have been engaged in each hall, where the merits of lime in stucco, plaster, concrete and masonry mortars will be graphically depicted. Its value in waterproofing will also be shown, experimentally, as well as its soil-sweetening effect on garden produce.

Current News

Happenings and Comments in the Field of Architecture and the Allied Arts

Mexico Retains Its Strength

When redemption comes to Mexico it will not be through fire and sword, but through the soil. An American who has made a study of Mexican conditions at first hand reminds us that a great English statesman once remarked that a country whose wealth was in the soil was like a pyramid with a great base. It might suffer superficial damage through a great shock, but it could never be destroyed.

This same American tells us that conditions of revolution in Mexico with hardly a cessation since 1911 have not affected in the least the real wealth of the country. Her riches, he says, are in wheat, corn, cattle, oil, hemp, gold, silver, copper, timber, fruits, coffee, tobacco, sugar, chocolate and many other products of the soil. With a rich soil and a climate that makes harvests possible the year around she could feed a nation six times the size of her own, while her timber, oil and mineral resources are almost virgin in their luxuriance. The problem then is how to so manage these resources as to give the people that measure of sufficiency that means contentment.

It cannot be done by parcelling out the land among all the people. Madero tried this and failed ignominously. Since the peon class constitutes nine-tenths of all the people, and since it has been in this state of peonage for centuries, it is incapacitated through ignorance and inexperience to cultivate the soil without some assistance, even if a land distribution were made. The whole class probably would starve before it raised the first crop. Some other measure is needed.

The government that is to be permanent in Mexico will be the one that hits upon the plan of helping these peons to become small land owners and then assists them in making a start as independent producers.

A Sixth Century Temple in the Jungle

In central Java there stands a temple built in the sixth century of the Christian era, which is in almost as perfect a state of preservation as when the workmen and artists laboring upon it laid down their tools. The temple is one of the architectural wonders of the world. Yet, strangely enough, little has been written of it except in great scientific volumes, mostly in Dutch, which do not come into the hands of the American architect.

Words fail adequately to tell of this remarkable building. It was reared according to the Boston *Transcript* by Buddhist missionaries and their followers to hold a vase of ashes of Buddha. The ashes of Buddha, according to the history of the times, were divided first into eight parts and placed in tombs in certain cities in India. Later King Osaka of India, the most jealous apostle of Buddhism in the annals of that religion, had the ashes redivided into eighty-four thousand parts, which were placed in separate vases and taken by different missionaries. Some of these men went to Java and soon the country adopted their religion.

As a fitting monument in which to place the vase of ashes the temple of Boro-Budur was erected. It is particularly interesting at this time, as a syndicate of Dutch capitalists has announced the starting of an airplane service throughout the Malay archipelago. Java, with its great population and trade connections, will be one of the most important islands on the route, and its marvelous temple will be the most interesting sight.

The temple of Boro-Budur is 150 feet high, and stands on an artificial plain encased with huge lava blocks. It is made up of terraces, the galleries of which are filled with bas-reliefs. In the corner of each of the galleries, which are many-angled, sits a Buddha on his lotus leaf.

Through the parapet of the artificial plain on which the temple stands are steps which are guarded by grotesque animals of stone. On the upper flat are seventy-two bell-shaped shrines. These are of lattice work stone and within every one of them is a Buddha seated gazing toward the vast central dome. This dome is fifty-two feet in diameter, and at one time had an immense topping spire.

Following the Moslem invasion in the fifteenth century, A. D., the temple was deserted, and surrounded with jungle. It remained unknown to the world until 1814, when it was stumbled upon by Sir Stamford Raffles, then lieutenant governor of the island. He at once realized the historic value of the wonderful temple, and put hundreds of men to work to reclaim Boro-Budur from the jungle. This undertaking was continued by the Dutch when they took over the island.

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Largest World Tunnels

Among the longest tunnels in the world is the Alberg tunnel under the Alps, which is six and three-quarters miles long. The Gunnison tunnel in Colorado is six miles long, and the Hoosac tunnel in Massachusetts is four and three-quarters miles long. The Mont Cenis, in Italy and France, is eight miles long.

The Croton water tunnel in New York is 33⅛ miles long, while the tunnel which drains the Freiberg mines, in Saxony, is 31½ miles long. The St. Clair tunnel, connecting Sarina, Ont., with Port Huron, Mich., is two miles long, and the Strawberry tunnel in the Wasatch Mountains is 50 miles long.

Palm Leaves Replace Canvas in Tent Cottage Walls

The tent cottage of the western summer resort is disappearing before the thatched palm house. The thatch house consists of the usual tent-cottage frame work, but instead of canvas, palm leaves are tacked on. These are quite durable and serve equally well for walls and roof. The result is a neater and more artistic appearance. The cost is also smaller as the palm thatch costs little as compared with canvas.

Massachusetts Institute of Technology Offers Architectural Courses

The Department of Architecture is offering a course in modelling in architectural ornament, under the direction of Mr. John A. Wilson, every Friday evening from half-past seven until half-past ten, and there will become available in the course of this scholastic year funds from which two scholarships will be offered, covering the amount of a year's tuition each, to special students. Details of the conditions for the latter will be announced later.

Color Screens for Show-Window Lights

Various technical obstacles have heretofore prevented the extended use of colored lighting for display windows, despite the attractive effects made possible by its application. It is learned from *Popular Mechanics* that manufacturers of a lamp reflector much used for show windows have now devised a simple metal frame which holds a removable sheet of colored gelatin over the mouth of the reflector, that material having been found eminently suited to the purpose. The gelatin, in the form of a slide, is supported by a mesh of fine wire, and an asbestos-cord harness holds the frame on the reflector.

The slides are readily changed or combined to produce any tint desired, and by the use of a flashing switch, alternate or successive color changes may be automatically made. The effects produced are not confined to the positive colors, and the subtle shades of moonlight, dawn and other special conditions, are easily simulated.

Ghosts No Drawback

In England there are people, desperate in their search for a home, who advertise that ghosts are no drawback. Any one who happens to own a heretofore unrented house, because the word has gone around saying it is haunted, is assured that the home-hunters will accept it at the rental desired regardless of the spirits reputed to roam about the house after dark.

India Builds Enormous Masonry Dam to Avert Famine

With the object of saving crops and averting the terrible famines of the region's past history, the construction of huge storage dams in India has been proceeding for years. In the Ahmednagar district of the Deccan, east of Bombay, a masonry dam now being completed at Bhandara reaches the enormous height of 270 ft., and 85 miles of canals will be necessary to utilize the water for irrigating 75,000 acres of Ahmednagar land. At Bargha, farther south, another great dam is being built for watering 125,000 acres in the districts of Poona, Satara, and Sholapur. A still larger project is the Nira right-bank canal, now nearly ready, which cost about $20,000,000.

Native Japanese Architecture Gives Way to Modern Styles

Modern buildings constructed after the Western manner are driving the native architecture out of the large Japanese cities, according to Dr. Y. Kataoka, consulting architect to the Osaka Municipality and member of the Osaka Municipality Laying Out Committee, who is a guest of the Hotel Pennsylvania, N. Y. Dr. Kataoka is here to study our modern office buildings and municipal building construction with a view to incorporating some of the American ideas with those at present in use in Japan.

"Our houses and shops are all built of wood after a style which dates back many centuries," said Dr. Kataoka. "It was all very well when we were isolated from Western civilization and only did our business in a small way. But with the increase of

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foreign commerce and the influx of men of many nations the old method of building is absolutely out of the question. We must build to gain the most floor space and to make the most of the ground that we have, for Japan is a nation which is even more overcrowded as to population than are your large American cities, as you undoubtedly know.

"I believe that in the course of time modern office buildings and apartment houses of Western construction will entirely drive the Japanese houses out of the cities. Japan may retain her present appearance in her country districts, but the whole face of the metropolitan area will be changed. It is rather sad to see the picturesque dwellings go, but, after all, it is the trend of civilization. We are making a new and modern world and the old must yield to the new. In our architecture, locality, climate, art and even religion must be taken into account, but modern experience teaches us also the necessity of consulting expediency, comfort and efficiency."

Wood That Does Not Rot

The wood of the mangrove tree which flourishes in French Guiana, is being exploited in France as a wood which will not rot. At least it has withstood all exposure and efforts to break down its fiber in four years of experiment by the officials of the French Railway service. Every one of the many samples which were subjected to all the known processes of inducing decay, behaved faultlessly, and it would seem that the wood is rot-proof. The grain of the wood is so close as practically to exclude moisture. Its density, indeed, is placed at 110, as against 40 in fir and 70 in oak. In addition to this closeness of fiber the mangrove has an unusually large amount of tanning in its composition. This protects it from invasion by insects. It also prevents the multiplication of various germs, and is a specific against such wood maladies as mold, damp and the like.

It has other desirable qualities. For instance, tests show that while it is not brittle, it presents twice the resistance to flexion that oak does. It has about the same potency against crushing or twisting.

Plan New York Subway Needs for Next Quarter Century

Based on an expected population of 9,000,000 in New York City 25 years hence, and on a consequent traffic of 5,000,000,000 passengers a year on rapid-transit systems, engineers have recently completed plans for the subways and trackage necessary to accommodate that increase. The cost of the proposed improvements at present prices is estimated at $350,000,000. An addition of 830 miles of single track to the existing 616 miles is contemplated, including an eight-track, double-deck trunk line under Eighth and Amsterdam avenues, so designed that four tracks can be built any time and the other four added later. This line will connect at both ends with branch lines, four of them going into Brooklyn, and others traversing Queens, The Bronx, upper Manhattan and other tributary districts. It will make close connections with the railroad terminals and the tunnels from New Jersey. Another trunk line, under Madison Avenue, will be six-track part of its length, and four-track in other parts. Numerous extensions of existing lines are also planned. To connect The Bronx, Brooklyn, and Richmond with Manhattan, 21 new two-track tunnels will be ultimately necessary.

Concrete Building of Seventeen Stories

The first modern office building to be erected in the "Swamp," New York's historic leather district, is now in course of construction at the Southeast corner of Frankfort and Gold streets.

The Hide and Leather Building will mark a turning point in the history of concrete engineering and of architecture. It will be seventeen stories above the ground and will have the distinction of being the highest concrete structure in the world.

It is also said to be the first high-class office building to be built entirely of concrete, without a brick or stone facing.

By a method used here for the first time, the facing of the concrete for the bottom three floors is composed of pink quartz, placed at the same time as the structural concrete. Thompson & Binger, Inc., are the designers, engineers and constructors of the structure.

Veneer Waste as Paper Source

In the wood waste from veneer factories the U. S. Forest Products Laboratory sees considerable raw material suitable for the manufacture of high grades of paper. The cores of many kinds of veneer logs, now used in a large part for fuel, would make excellent pulpwood. In addition, a large part of the clippings and small veneer waste, which amount to 1-5 of the total veneer cut, probably could be turned into pulp stock with profit.

Among the veneer woods whose waste has paper-making possibilities are red gum, yellow poplar, cottonwood, birch, tupelo, basswood and beech. Many veneer factories cutting these species are already within shipping distance of pulp mills. In certain other cases, veneer factories are so grouped that they might furnish pulpwood enough to warrant the erection of

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a centrally located mill. Other economic factors being favorable, such a mill could profitably operate on a daily supply of veneer waste equivalent to 50 cords of ordinary pulpwood. Of course, the construction of a mill should be undertaken only upon the advice of a competent mill engineer after a careful survey of local conditions.

"White Coal" in Canada

In view of the world's diminishing coal resources, "white coal," or developed water power, is more than ever commanding attention in various countries. Canada is now said to possess the greatest per capita water power development of any country in the world excepting Norway. According to "The Dominion of Canada," a study by the Bankers Trust Company, of New York, Canada, with 19,500,000 "white coal" horse power available, has a per capita development of .26 horse power, compared with .54 horse power for Norway, and .07 horse power for the United States. The latter country, with 30,000,000 "white coal" horse power available, leads the world in potential and developed water power resources, and Canada comes next.

Longer Life for Mine Timbers

Enormous quantities of valuable timbers are being placed in the coal and metal mines of this country without any preservative treatment against decay. That the life of these timbers might be greatly lengthened by the injection of certain chemicals has been proved by the U. S. Forest Products Laboratory in numerous service tests. In 1910 the laboratory installed in an Alabama mine untreated timbers and timbers which had been treated with coal-tar creosote. Ten years later all the untreated timbers had been removed because of decay, while 80 per cent. of the creosoted timbers were still sound, and none had decayed to a point where removal was necessary. This is only one of the many records obtained by the laboratory which should induce every mining company to install some sort of wood treating plant.

Grand Union Hotel Site Used by Bowery Savings Bank

As a site for a monumental structure for a branch bank that will be the equal of the many famous buildings in the Grand Central Terminal zone the Bowery Savings Bank has purchased the easterly portion of the old Grand Union Hotel site, Park avenue and Forty-second street.

This property, probably one of the most valuable vacant pieces of land in the world, is part of the site chosen for the erection of Victory Hall, New York's proposed memorial to those who served America in the World War. Whether the memorial, estimated to cost about $20,000,000, will be erected on this particular site is now a question. The Victory Hall Association will start a drive to raise the money by popular subscription soon, and if it meets with success it will be able to buy the site or, it is asserted, take it by legal action, as the Legislature on April 27, 1920, passed a bill authorizing the association to acquire, by condemnation proceedings, the property necessary for its proposed building.

Whitney Warren to Restore Louvain

Whitney Warren has been selected to restore in all its former artistic beauty the ancient University of Louvain, which was destroyed by the German army that invaded Belgium in 1914.

Mr. Warren was informed of the honor conferred upon him by a cablegram received at his studio which read:

"You were advised by letter that the committees of Louvain and Paris had both unanimously nominated you architect for the reconstruction of the University of Louvain. Today the committees met again and the president, M. Imbart de la Tour, and the vice president, M. Boutrouse, have asked me to confirm your nomination and to ask you to assume the task of reconstruction."

Mr. Warren replied:

"This is the first information I have received about my selection to restore Louvain University. It is an unusual honor and if I can possibly arrange it I shall be only too happy to take up the work. Much of the funds for this work is, I believe, to come from this country, for when Cardinal Mercier was here an American committee, co-operating with the Belgian and French committees, was formed, with Dr. Nicholas Murray Butler at its head, for the purpose of raising funds for the restoration of the library of the University of Louvain. This committee is now busying itself with the raising of a fund of $500,000, of which $150,000 has been pledged to date."

George W. Breck Dead

George William Breck, well known mural painter and sculptor, died at his home, 521 Broadway, Flushing, Queens, this morning of apoplexy. Mr. Breck had been a resident of Flushing for the past ten years following his work at the American Academy of Fine Arts at Rome. He was prominent in the civic work of Flushing, was a member of the Flushing United Association and also of the Artists Advisory Committee for the Flushing Soldiers and Sailors Memorial.

Mr. Breck was born in Washington, D. C., on

Sept. 1, 1863, the son of John and Annie Auer Breck. He first studied at the Art Students League in New York and was the first winner of the Lazarus Scholarship for mural painting, thereby winning the right to become a student at the American Academy of Fine Arts at Rome. He was a director of this academy from 1904 to 1909 when he returned to this country. Among his prominent works were the mural decorations of the University of Virginia, the Watertown, N. Y., Public Library, mosaics at St. Paul's Episcopal Church at Rome and the decorations in the home of the late Whitelaw Reid. He won a silver medal at the 1904 St. Louis Exposition.

Mr. Breck was a member of the Century Club, the Architectural League of New York, the Society of Mural Painters, the Municipal Art Society and served on the New York City Art Commission from 1912 to 1916.

European Streets Surpass Ours in Cleanliness

The large cities of Europe in the point of cleanliness and tidiness of streets are far ahead of New York, Chicago, Cincinnati and many cities in America, says Clyde A. Copson, manager of the anti-litter bureau of the Merchants' Association, who has just returned from a trip of observation in Europe.

"In some sections of New York," he said, "I can see more street litter in one square block than in any one city I visited abroad. Paris and London are models of cleanliness and comparatively free of street litter of any description. This is due to the fact that the people abroad are more tidy than we who live in America.

"The city of New York countenances conditions that none of the cities which I visited would tolerate for a moment."

Mr. Copson said that London has the best organized street cleaning department in Europe; Glasgow, the poorest, and Paris has the best garbage disposal system.

Referring to taxicab drivers and all chauffeurs abroad, Mr. Copson's statement said that they "seem to know their business and when in trouble, or about to run down a pedestrian, they apply the brakes instead of tooting horns. The chauffeurs in New York do just the opposite, hence the greater number of accidents and noises.

"Newsboys and venders in London," he added, "do not shout their wares, but instead carry signs on which is printed in large letters the important news headlines. The system helps considerably in lessening the general noise. The subways, or 'tubes,' as they are called in London, are more comfortable than ours and scrupulously clean."

Concrete Brine Troughs Protect Railway Bridges

As much damage is being done to steel railway bridges as a result of brine from refrigerator cars attacking the metal, a narrow concrete trough, placed midway between the rails and designed to catch the objectionable fluid, is being installed on all steel bridges of a Michigan railroad. Concrete is unaffected by salt solutions.

Personals

W. A. Vaughn, architect, has moved his offices from 61 New York avenue N. W., Washington, D. C., to 3100 South Dakota avenue S. E., that city.

The I. T. Hatton Co., architects, 1200 U street N. W., Washington, D. C., will trade in the future under the name of I. T. Hatton, architect, and L. W. Gilles, associate architect.

Thaddeus W. Parke, architect and engineer, has opened an office at 215 Foster street, Lowell, Mass.

Oscar F. Cook, architect formerly with the A. A. Honeywell Co., architects, 218 Citizens' Trust Bldg., Kokomo, Ind., has opened an office for the practice of architecture, at 217 Citizens Bank Bldg., that city.

Wm. W. Cooke has opened offices at 2308 Adams St., Gary, Ind., for the practice of architecture. He desires manufacturers' data and samples.

Jobson & Hubbard have moved from the Pullman Bldg. to 225 N. Michigan Ave., Chicago.

Hewitt & Brown have moved to 1200 Second Ave. South, Minneapolis, Minn.

Tilden & Register are in new offices at 1525 Locust St., Philadelphia.

Croft & Boerner are now at 1006 Marquette Ave., Minneapolis.

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Weekly Review of the Construction Field

With Reports of Special Correspondents in Prominent Regional Centers

THE feeling of uncertainty, not only in the building industry, but in almost every other industry as well, is still with us.

This statement is substantiated by the fact that the world wide decline in commodity prices which set in last spring has shown considerable acceleration during the past month, especially in Great Britain and the United States.

The various price indices in the United States show declines of from 13 to 33 per cent., the Monthly Review of the Federal Reserve Bank of New York states in its issue of November 30:

A substantial portion of these declines has occurred in the last sixty days, and already there are signs that the lower prices for raw material and goods at wholesale are beginning in some cases to be reflected in retail prices and that thus consumers are beginning to receive the benefit of the enhanced buying power of the dollar.

WHOLESALE PRICE INDICES

Country	Per cent. decline during latest month reported	Per cent. decline from highest
United States		
Bureau of Labor	7.0	17.3
This bank's index (12 basic commodities)	5.2	33.5
Dun's	4.3	13.7
Bradstreet's	7.3	24.9
British		
Economist	6.2	14.1
Statist	3.4	9.9
French	4.4	13.9
Italian	8*	2.1
Japanese	2.1	28.3
Canadian	2.9	11.0
Swedish	4.4	6.2
Australian	2.5	2.5
Calcutta	1.0	5.5

*Increase.

These indices include basic commodities, among which practically all the basic building commodities are listed. Yet employment decreased in the building trades some 12 per cent. during November and is now 30 per cent. below the peak reached in the spring and early summer, due, in part, to the usual seasonal declines and in part to a lack of new construction.

Perhaps this has something to do with the future rate of interest, which, it is pointed out in financial circles, will not be markedly lowered in the future. The reasons given are: First, the reported intention of the farmers to withhold their crops from the market, thus tying up an indefinite amount in loans. Second, heavy borrowings from the Federal Reserve banks. Third, the apparently unlimited demand for loans by foreign states and municipalities. Fourth, the money needs of American railroads, American industries and American cities; and finally, the funded and unfunded indebtedness of the Federal Government which will mature in the next four years. The Government requirements alone show an approximate total of eight billion dollars.

In the face of these facts it would seem that the suggestion offered by President Dunning, of the New York Savings Banks Association, that the small banks dispose of their long-term bonds, even if at a loss, for the purpose of first mortgage investment, would be seriously considered.

It certainly seems to have been seriously considered. S. W. Straus & Company has this to say regarding Mr. Dunning's proposals:

In general, his contention that the banks would do well to place a larger proportion of their assets in the highest grade mortgages has attracted widespread approval and certainly is worthy of the most serious consideration. What he says in regard to the advantage gained from disposing of long-term listed bonds, even at a loss from the purchase price, is incontrovertible and his argument in favor of high-grade securities is a very striking one which we believe merits the careful attention of bank officials, especially in those states where the legal restrictions are such that a wide choice of good mortgage investments is available to the banks.

If "what he says in regard to the advantage gained from disposing of long-term listed bonds, even if at a loss from the purchase price, is incontrovertible . . . and merits the careful attention of bank officials," why have not bank officials given it careful attention?

From all indications at the present moment it is just as difficult to obtain money for building purposes at it has been in the past. Would "careful attention" to Mr. Dunning's proposal, admittedly "incontrovertible," permit of such a condition?

As regards labor the situation is being bettered. The dismissal of two radical leaders from the national labor councils has been effected within the last

week, and the New York tangle is being slowly, but surely, straightened out.

Newark, N. J., witnessed an unusual and novel attempt by labor to unionize architectural draftsmen, but the attempt failed because of the stand both the architects and draftsmen took upon the matter. The fact that it failed is significant. It shows that labor knows its limits and will stop within them, when it meets opposition outside of those limits. There is plenty of common sense in the ranks of labor. The problem is to make it show its hand.

(Special Correspondence to THE AMERICAN ARCHITECT)

SEATTLE.—Building activity on the Pacific Coast for the coming year will depend largely on how far the retail trade is willing to go in dehydrating war-time profit margins. Wholesalers and jobbers contend that they have performed their part in acceding to the demands of the hour, but that the retail trade has made little if any change in these margins that it is felt can no longer be permitted to stand, their purpose having been served.

A rather exhaustive survey of the jobbing field which comprises all building essentials from steel and lumber to brass fittings indicates that 1921 is to be an extraordinary year on the Pacific Coast for building, but that unless all concerned in the production, jobbing and retailing of these commodities are willing to at once or immediately following stock taking bend to the demands that are familiar to all, the beginning of this wave of construction will be delayed so far into the new year that not to exceed 50 per cent. of the buildings can be got under way until cold weather again shuts off the work.

Architects have been consulted with rare frequency on the subject of building by investors, but the enquiry is never without an urge for information about prices. It seems clear that unless costs of construction materials recede signally there will be another year of "homeless" families.

The best that jobbers in steel products are able to report on the Pacific Coast is a decline of 20 per cent. in a few of the building essentials. The Jones-McLaughlin announcement of the week did not have any effect on coast steel products, as it was felt that it was provincial in its effects and not at all significant of any general reduction.

The feature of the week, however, seems to lie in the fact that in place of dodging orders or complaining of inability to load back orders the eastern steel mills are now vigorously soliciting new placements, claiming that their motive is to keep the plants in operation. There has been a slow but gradual accretion of stocks of nails and large and small pipe, which has held building in check for several months until warehouses contain a sufficient supply of these commodities to meet the demand of the hour. Any sudden increase would obviously run jobbers short in three-quarters and half-inch galvanized pipe, but there are nails enough including the once abnormally-scarce 3-penny fine steel blues to square with an active spring building season. Jobbers are not, however, endeavoring to pile up stocks, but wish to be in position to face a busy building year should it happen to start immediately after stock taking.

It is the feeling of Pacific coast jobbers that the economic revival over the country will have its inception in building commitments, and that buying will start almost simultaneously.

Independent steel mills are recovering rapidly on back orders, as the situation is expressed to coast jobbers, and have begun to urge new business for immediate shipment. Despite this impulse in the east, jobbers are inclined to run close on stocks.

It is estimated that eastern mills are four months behind on small pipe. Cement and brick are steady, but building paper of all grades has declined 20 per cent. within the past ten days. Jobbers of building paper, wall board and cement are inclined to believe that these materials will follow closely the declines in steel.

Fir lumber prices have steadied down, but 43 large mills in the West Coast fir producing territory have closed, announcing that the market has fallen to a point where they can no longer proceed with cutting and take the losses involved. Accumulated stocks are 55 to 60 per cent. over normal and production for the last week was 30 per cent. under normal. Sales to eastern buyers were only 906 cars, against 1,077 cars for the preceding week and approximately 10,000 cars under normal for this time of the year, when eastern spring buying is usually well under way. The fir mills cut 60,100,000 feet, when their capacity is 140,000,000 feet.

Price cutting by one of the larger mills which brought eastern orders for 25,000,000 to 30,000,000 feet was not met by the mills generally. Prevailing averages at which lumber was sold this week at the mill was $51 to $54 for No. 2 vertical grain flooring, 1 x 4, $31 to $33 for No. 3, $29 to $31 for No. 2 and better slash grain flooring 1 x 4 and $21 to $31 for No. 3. No. 2 and better five-eights ceiling sold at $58 to $68, with No. 3 at $31 to $35. Drop siding is $31, boards and shiplap $16.50 to $17.50 and common dimension $13.50 to $15.50. Red cedar shingles are weak at $2.40 to $2.50 for stars and $2.75 to $2.85 for clears.

(Special Correspondence to THE AMERICAN ARCHITECT)

BOSTON.—While reports of further curtailment in industry, continued to fall in commodity prices and increased unemployment show still the un-

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settled condition in business circles, there appears to be a more cheerful tone in several sections.

Some of the lines of business which were tardy in feeling the effects of nation-wide deflation of prices are now suffering, while those which were first to feel the drying up of public demand for goods are beginning to see relief. This applies particularly to the leather, boot and shoe industries of New England. The latter has experienced something like six months of stagnation. Readjustment has been drastic. But during the past two weeks orders have been coming in from concerns who have not been in the market for months.

There has been a decided swing to oil burning installations in Massachusetts during the past year. According to the State Fire Marshall the metropolitan area will see a cut in its coal consumption to half its present size within the next few years due to oil burners. To date there have been 122 conversions from coal to oil burning plants in Boston and 81 in the State at large. Most of the changes have been made in the past six months and many factories, stores, hotels and office buildings, it is said, are known to be planning oil burners for next winter. Five of Boston's largest hotels have installed this type of burner.

New England's remoteness from the coal mines makes substitute fuel of any kind important especially when manufactured within New England. Crude oil can be shipped here in large quantities by rail or water. Fuel oil, one of its products and manufactured at the points of greatest consumption, will obviate the possibility of fuel shortage such as New England has faced as often as labor troubles threatened mines or railroads.

(*Special Correspondence to* THE AMERICAN ARCHITECT)

CHICAGO.—Chicago remains locked in the unyielding clasp of its building tie-up, but there are increasing indications that something is getting ready to snap. The program of $150,000,000 in arrested construction now seems to stand a much better show of early consummation than was the case a few weeks ago.

The recent days have brought new and interesting developments in the situation, the most important perhaps being the federal investigation, which is now said to be under way, touching the sash, door and blind problem. Heretofore only the product of union mills could be used in building construction in Chicago, and this provision automatically precluded the product of many of the outlying manufacturing centers such as Kenosha, Oshkosh, Bay City, Muskegon and other important woodworking centers where the open shop prevails. A provision in the working arrangement between the building trades unions and the contractors and mill men insists upon union millwork and creates, in the opinion of many, a virtual monopoly for Chicago manufacturers, although the Chicago mills cannot turn out more than 40 per cent. of the normal requirements of the city.

This situation, clouded in obscurity by the evasion of all concerned, is now being looked into by a federal grand jury upon the suggestion of United States District Attorney Charles Clyne. Mr. Clyne has made a personal investigation and believes that he has enough damaging particulars to cause the combination considerable trouble. He even hopes to break up the arrangement and permit the free inflow of outside sash and door products into Chicago. Such a removal of the restriction would undoubtedly reduce the cost of building in Chicago and would subtract, in the opinion of experts, something like $4,000,000 from the city's rental bill.

That there will be a determined effort to offset the efforts of Mr. Clyne goes without saying, because Chicago has been for a long time a most unfavorable field for the outside producer. This was shown some months ago, when an ambitious housing plan was being discussed and when ready-cut houses from Bay City and other outside points were to be brought into Chicago to relieve the acute housing shortage. It was found that such materials could be brought here, but that union carpenters would not assist in their erection.

Anything that would tend to reduce the cost of mill work to the builder would, of course, do a great deal toward stimulating building in general, because the cost of materials is now getting to be the very eye of the building needle.

Aside from the federal entrance into the building complex, another point of interest in the evolving problem is the possibility of state supervision in some form or another. It is understood that an effort may be made shortly after the state legislature convenes next month to frame and pass a measure for the creation of a supervision body such as the Lockwood Committee in New York. This committee would be empowered to go fully into the building situation and determine the exact obstacles in the path of the $200,000,000 program which is now being held up in Chicago and in Illinois outside of Chicago. Even a $60,000,000 good roads plan voted by the people of Illinois in 1919 is being held back because of the high cost of materials and labor.

Even more important perhaps than the federal or state interference in the building mix-up is the drop in a considerable list of materials during the recent past. Builders contend that the slashes have not been far-reaching enough to really meet the situation, but they are thankful for any little concession that may present itself.

Cuts in cement, plaster, sand, and other items in

the materials list have suffered declines, cement being down to $2.25 a barrel in this market at this time.

Some of the reductions made may be noted in the sub-joined list:

	Old price.	New price.	Pct. dec.
Wooden lath, per M	$20-$22	$ 9-$12	50
Plaster, ton	22- 23	20	11
Sand, stone and gravel, cu. yd.	4.25	3.50	17.6
Hollow clay partition tile, per 1,000 sq. ft.:			
3 inch	150	110	27
4 inch	160	120	25
6 inch	220	165	25
8 inch	300	225	25
Fire clay, ton	12- 25	9- 18	27
Bricklayers' cement, brl	3.55	3.20	10
Roll roofing, roll	4.00	2.50	37.5
Asphalt indiv. shingles	9.00	6.50	28
Strip shingles	7.00	5.10	28

Wall boards, per 1,000 feet—$3 to $5 off.

Metal lath, per square yard—Reduced 3 cents to 5 cents, a flat 10 per cent. cut.

Coping—Horizontal cut of 10 per cent.

Flue lining—Average cut of 10 per cent.

Lime—A cut of 10 per cent.

Whether these reductions are sufficient to prove of any great value in stimulating building activity remains, of course, to be seen. Important construction companies are inclined to think that the concession is the merest drop in the bucket and that further cuts must be made.

Such a condition seems to have been sensed by the manufacturers of ready mixed paints. Mixed paints were recently cut some 50 cents per gallon by the leading Chicago manufacturers, and there is the expectation on the part of those posted on such matters that further cut of perhaps the same amount will shortly be forthcoming. Whether the action of the paint manufacturers will serve as an example for other materials manufacturers is the subject of some speculation.

Incidentally the manufacturers of paint and varnish in Chicago are confidently expecting a big building boom in 1921 and in the years to follow. S. Marshall Evans, president of the National Association of Paint, Oil and Varnish Clubs, in an address in Chicago last week, predicted a long term of very great activity in the building trades and consequent prosperity in all lines touching the building industry.

Labor costs remain stationary as far as actual figures are concerned, but the efficiency of labor in the building trades is increasing. It is estimated that individual production on building work is now 25 per cent. higher than it was during the rush period of 1918 and 1919. The specter of unemployment is beginning to be seen and feared in Chicago and this is doing much to stimulate better work and less loafing in the building trades.

Lumber costs show practically no change, although the situation in the lumber market is weak. Dealers and manufacturers alike expect a resumption of activity, however, as soon as the first of the year turns the corner.

Prices of lumber and materials at this date are as follows, in the principal items:

Yellow Pine: B. & B. 1 inch, $95 to $130, depending on thickness; 2 x 4, No. 1, 10 to 16 ft. length, $51 to $53; 2 x 6, $48; 2 x 8, $50; 2 x 10, $53; 2 x 12, $55; 13-16 x 3¼ b & b flat flooring, $85 to $90; 1 x 6, No. 2 common, $48 to $90.

Douglas Fir: S 4 S, in sizes up to 12 x 12, in length up to 32 feet, $65 to $70; 14 x 14, $68 to $73; 16 x 16, $72 to $75; 18 x 18, $75 to $80.

Hard Maple: Four, ¼ No. 1 and 2, $135; select, $120; No. 1 common, $100; No. 2 common, $65; No. 3 common, $32.

Birch: Four ¼ No. 1 and 2, $160; select, $133 to $138; No. 1 common, $95 to $100; No. 2, common, $60 to $65; No. 3 common, $40.

Red Gum: Four ¼ No. 1 and 2, $150; No. 1 common, $90 to $92; No. 2 common, $47.

Building permits in November showed an increase over the preceding month. The following tabulation issued by Building Commissioner Bostrom summarizes the situation:

	Oct., 1920	Nov., 1919	Nov., 1920
Factories	109	167	121
Residences	124	527	116
Apt. bldgs.	4	38	12
Others	9	33	11
Total permits	246	765	260
Frontage	8,510	26,363	9,839
Cost	$3,538,150	$17,577,000	$3,838,150

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Foreign Notes

Spanish Cities Meeting House Shortage

A gigantic effort to settle the housing problem of the Spanish capital by the inrush of thousands of country folk to the city, is in progress in the northern section adjacent to the suburb of Guatro Camios. A private concern has acquired an enormous tract of land and has begun building what for Madrid are skyscrapers of ten stories. Each of these buildings is to contain 400 flats and 40 stores. The new model suburb is to be in all respects modern. Engineers are now engaged in laying out a boulevard running through its center over half a mile long and 130 feet in width, with two carriage ways and a central promenade lined with trees.

World Competition for Cairo Hospital

We are able to announce this week an important competition, to be thrown open to architects the world over, for the design of what will be the world's largest hospital, which is to be erected by the Egyptian Government at a cost exceeding $25,000,000. The old Qasr-el-Aini hospital is to be superseded by a new one in which provision will be made for about 1,250 beds. There will also be formed, in connection with the hospital, an important medical school (which will give special attention to the study of tropical diseases), a dental school and clinic. The medical school will be composed of 600 students; the dental students will number 120, with about sixty pharmacy students. There will also be built a large students' club and nostel, and a nurses' training school.

The site contains about fifty acres. Even so, the Egyptian Government have been strongly advised to acquire still more ground, and they have agreed to do so.

The Egyptian Government's adviser in the matter has been Mr. John W. Simpson, president of the R.I.B.A. He states that the hospital would meet all European requirements, and the site on Rohda Island, on the Nile, was probably the finest in Cairo, it being open to the cool north and northwest winds which for the most part prevail.

It has been decided to hold an international preliminary competition for the design of the hospital. Architects the world over are to be invited to compete, and out of these six will be selected for the final. The Government will nominate six other architects of repute in hospital practice, so as to make in all twelve final competitors, each of which will be assured of a fee of $2,500.

The Government have agreed to accept the R.I.B.A.'s scale of fees, to be paid in addition to the $2,500 honorarium. Moreover, the architect placed second will receive an additional $2,500—in all $5,000.

The competition is one which will require a special study, owing to the difference of Egyptian from European diseases and local conditions. One important factor in the designing will be the complete separation of the sexes, to comply with the very strict Mohammedan law.

A Victim of the Bolsheviks

Bolshevism has made Petrograd a purgatory for professional men. A case in point has been brought to our notice. An architect of high attainments and considerable standing, happy and skilful in his work, and prosperous at it, has been driven into exile. "At the end of 1920," he writes in the *Architects' Journal* of London, "I escaped on foot with my family from that communistic hell" (Petrograd); "and now," he adds, with a pathetic simplicity of phrase that recalls the manner of some of the most poignant passages in Greek tragedy, "and now I am seeking for work." Was it Carlyle who said something to the effect that "the most pitiful sight on God's earth is a good man seeking work and finding none?" This exile is undoubtedly a good man in every sense of the term. A correspondent speaks of his "great natural ability, unflagging assiduity and perseverance. . . . His career at the Academy of Fine Arts at Petrograd was brilliant; his professors considered him one of their best students. His designs have been much admired, displaying practical thought, refinement and originality." He has traveled, and is master of several languages. A letter of his that we have seen is in faultless and fluent English. We are informed that he has made a close study of the housing problem. He has a young family to support. He can give excellent references. According to our information, he is of fine scholarship, high capacity, clean credentials. He should not lack opportunity for the exercise of his talents, relief from his unmerited misfortunes.